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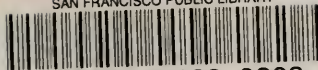
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Appendix to Journals

APPENDIX TO THE JOURNALS

OF THE

SENATE AND ASSEMBLY

OF THE

TWENTY-SECOND SESSION

OF THE

LEGISLATURE OF THE STATE OF CALIFORNIA.

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Volume I.



SACRAMENTO:

STATE OFFICE : : : F. P. THOMPSON, SUPT. STATE PRINTING.

1878.

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1887-1888

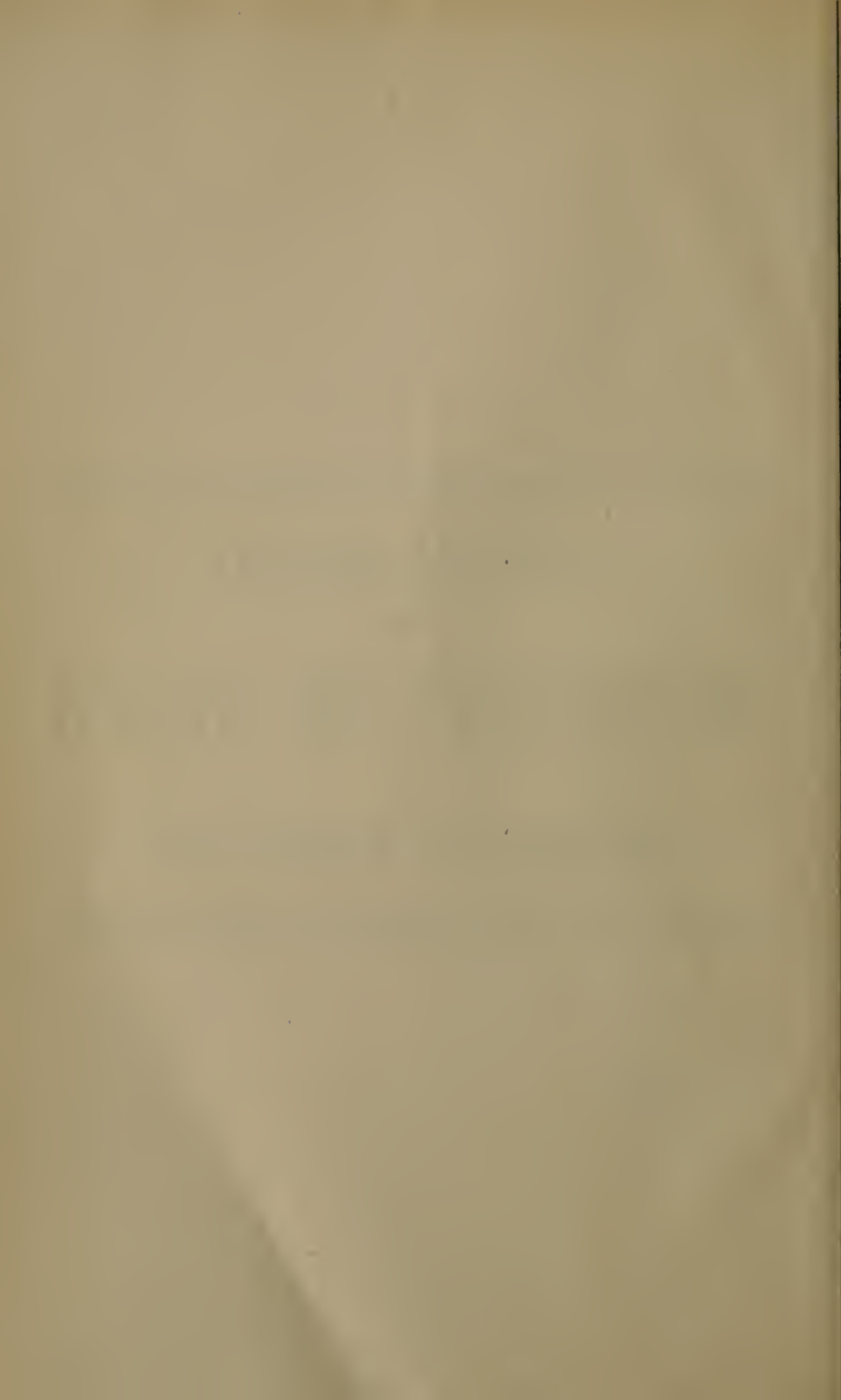
BIENNIAL REPORT

OF THE

SECRETARY OF STATE

FROM

DECEMBER 6, 1875 TO JULY 1, 1877.



STATE OF CALIFORNIA—DEPARTMENT OF STATE, }
SACRAMENTO, July 6th, 1877. }

To His Excellency,

WILLIAM IRWIN,

Governor of the State of California:

SIR: In compliance with the requirements of the Political Code of the State relative to the duties of Secretary of State (Section 408, Subdivision 17), I have the honor to submit the following Biennial Report of the transactions of this department from the commencement of my term of office, December sixth, eighteen hundred and seventy-five, up to and including June thirtieth, eighteen hundred and seventy-seven.

Very respectfully,

THOMAS BECK,

Secretary of State.



BIENNIAL REPORT.

During the last session of the Legislature I was required by committees from both Houses to furnish them, from time to time, with statements showing the expenses of the State under the control of this department, during that session, as compared to expenses of former sessions; and having been compelled to make these statements at a time when the whole force of the office was employed to the full extent of its capacity, I have considered it advisable, and not inappropriate, to place this information in such a form that it can the more readily be obtained by adding to each branch of this Report a statement showing the expenses for similar purposes that had accrued during the corresponding nineteen months of the preceding administration.

From the commencement of my term of office (December sixth, eighteen hundred and seventy-five), up to the date of this Report, the amounts received in this office as fees, and paid into the State treasury, are as follows:

Amount received from Drury Melone, December 6th, 1875		\$347 25
Fees received during the month of December, 1875		957 75
Fees received during the month of January, 1876		1,612 50
Fees received during the month of February, 1876		1,302 95
Fees received during the month of March, 1876		1,283 75
Fees received during the month of April, 1876		1,356 65
Fees received during the month of May, 1876		1,119 70
Fees received during the month of June, 1876		2,451 00
Fees received during the month of July, 1876		1,307 50
Fees received during the month of August, 1876		981 00
Fees received during the month of September, 1876		937 50
Fees received during the month of October, 1876		797 00
Fees received during the month of November, 1876		488 00
Fees received during the month of December, 1876		989 05
Fees received during the month of January, 1877		893 50
Fees received during the month of February, 1877		787 80
Fees received during the month of March, 1877		1,000 50
Fees received during the month of April, 1877		837 75
Fees received during the month of May, 1877		919 50
Fees received during the month of June, 1877		908 00
<hr/>		
Total amount of fees received		\$21,278 65
Received from sale of Codes	\$342 50	
Received from sale of Geological Report	5 00	
Received from sale of California Reports	66 00	
Received from sale of ballot paper	808 05	
Received from sale of Statutes and Amendments 1875-6	161 00	
Received from sale of old carpet in Treasurer's office	30 00	
<hr/>		
		1,412 55
<hr/>		
Total receipts for nineteen months		\$22,691 20

January 3d, 1876, paid into the State treasury	\$1,305 00
February 2d, 1876, paid into the State treasury	1,612 50
March 2d, 1876, paid into the State treasury	1,302 95
April 4th, 1876, paid into the State treasury	1,283 75
May 5th, 1876, paid into the State treasury	1,356 65
June 2d, 1876, paid into the State treasury	1,119 70
July 7th, 1876, paid into the State treasury	2,451 00
August 3d, 1876, paid into the State treasury	1,307 50
September 5th, 1876, paid into the State treasury	981 00
October 7th, 1876, paid into the State treasury	937 50
November 2d, 1876, paid into the State treasury	797 00
December 1st, 1876, paid into the State treasury	488 00
January 5th, 1877, paid into the State treasury	989 05
February 2d, 1877, paid into the State treasury	893 50
March 5th, 1877, paid into the State treasury	787 80
April 5th, 1877, paid into the State treasury	1,000 50
May 5th, 1877, paid into the State treasury	837 75
June 4th, 1877, paid into the State treasury	919 50
July 6th, 1877, paid into the State treasury	908 00
Total paid into Library Fund	\$21,278 65
Paid Treasurer for sales of Codes, March 2d, 1876	\$195 00
Paid Treasurer for sales of Codes, June 2d, 1876	97 50
Paid Treasurer for sales of Codes, October 7th, 1876	17 50
Paid Treasurer for sales of Codes, January 5th, 1877	7 50
Paid Treasurer for sales of Codes, April 5th, 1877	12 50
Paid Treasurer for sales of Codes, July 6th, 1877	12 50
	342 50
Paid Treasurer for sales of Geological Reports, July 6th, 1877	5 00
Paid Treasurer for sales of California Reports, October 7th, 1876	54 00
Paid Treasurer for sales of California Reports, July 6th, 1877	12 00
	66 00
Paid Treasurer for sales of ballot paper, October 7th, 1876	143 15
Paid Treasurer for sales of ballot paper, April 5th, 1877	575 65
Paid Treasurer for sales of ballot paper, July 6th, 1877	89 25
	808 05
Paid Treasurer for sales of Statutes and Amendments 1875-6, October 7th, 1876	94 50
Paid Treasurer for sales of Statutes and Amendments 1875-6, April 5th, 1877	60 50
Paid Treasurer for sales of Statutes and Amendments 1875-6, July 6th, 1877	6 00
	161 00
Paid Treasurer for sale of old carpet, March 5th, 1877	30 00
Total amount paid into State treasury	\$22,691 20

The foregoing statement shows the receipts of the office for fees, during the nineteen months of my term, commencing December sixth, eighteen hundred and seventy-five, and ending July first, eighteen hundred and seventy-seven, to be the sum of twenty thousand nine hundred and thirty-one dollars and forty cents.

By reference to the biennial report of my predecessor for the corresponding nineteen months of his term, commencing December fourth, eighteen hundred and seventy-one, and ending July first, eighteen hundred and seventy-three, the receipts of the office for fees was eleven thousand and forty-four dollars and fifty-five cents, showing an increase during my term of nine thousand eight hundred and eighty-six dollars and eighty-five cents.

The fees received by me were for the following services, viz:

1,140 certified copies of articles of incorporation filed, recorded, and certificates issued upon, amounting to.....	\$11,115 00
527 commissions to Notaries Public, amounting to.....	2,635 00
45 commissions to Commissioners of Deeds, amounting to.....	225 00
63 trade-marks filed and recorded.....	189 00
18 official bonds filed and recorded.....	90 00
For certificates of official character and other certificates, copies of laws and other documents and papers, attesting and entering warrants of arrest, land patents, and various other miscellaneous business.....	6,677 40
	<hr/> \$20,931 40

It had been the rule of the office to charge the same fees on certificates of "increase of capital stock," "to extend time of existence," and "to continue its existence" of corporations as were charged on filing the copy of articles of incorporation, but complaints having been made against such charges, and finding no law to justify the same, I have discontinued it. Had I not have done so, the receipts of the office for fees would have been still further increased.

As there appears to be some ambiguity in relation to the matter of fees for certain services rendered in this office, I would respectfully suggest that some amendment be made to the present fee bill for the Secretary of State's office.

If it was not intended that fees should be charged for other services than those specified in section four hundred and sixteen of the Political Code, a clause should be added to that section, as follows: "Unless otherwise provided by law, no fees shall be charged or collected for any other services rendered than those herein enumerated." There are various papers filed and services performed in the Secretary of State's office other than those specified in said section four hundred and sixteen, and of a like character, for which fees should be charged, of which no mention is made in any law, and if it was the intention of the framers of the law that fees should be collected for them, then section four hundred and sixteen should be so amended as to include them.

CONCERNING CORPORATIONS.

I would respectfully call the attention of your Excellency to the following. The Legislature at its last session added a new section to the Civil Code, known as section two hundred and ninety-nine, which reads as follows:

299. No corporation hereafter formed under the provisions of this Chapter shall purchase, locate, or hold property in any county of this State without filing a certified copy of the certificate of its articles of incorporation in the office of the County Clerk of the county in which such property is situated within sixty days after such purchase or location is made; and every corporation now in existence must, within ninety days after the passage of this Act, file a certified copy of the certificate of its articles of incorporation, as provided in this section; and a certified copy of such copy shall, as evidence, have the same force and effect as a certified copy of the original. Any corporation failing to comply with the provisions of this section shall not maintain or defend any action or proceeding in relation to such property.

The certified copy of the "certificate of its articles of incorporation," mentioned in this section, is interpreted by some to mean a certified copy of the *certificate* issued from the Secretary of State's office upon the filing of the certified copy of articles of incorporation, as provided for in section two hundred and ninety-six of the Civil Code (see Amendments to the Codes, 1873-4, page 199); others interpret it to mean a certified copy of the "copy of the original

and would also respectfully suggest that some change be made in the law as to the purchase and sale of ballot paper.

The last Legislature made an appropriation of fifteen thousand dollars for the purchase of ballot paper, when required. Of this amount I have expended the sum of five thousand dollars in the purchase of one thousand reams, (which is one dollar and thirty-seven cents per ream cheaper than the old lot which was purchased by my predecessor,) leaving a balance of ten thousand dollars of the appropriation unexpended.

I hereto append a statement of the transactions in ballot paper during my term:

	Reams.	Sheets.	Reams.	Sheets.
Number of reams received from my predecessor.....	807	202		
Number of reams purchased.....	1,000		1,807	202
Number of reams sold.....	103	235		
Number of reams distributed.....	1		104	235
Number of reams on hand July 1st, 1877.....			1,702	447
Amount received from sales of ballot paper, and paid to State Treasurer.....				\$808 05

STATUTES OF EIGHTEEN HUNDRED AND SEVENTY-FIVE AND EIGHTEEN HUNDRED AND SEVENTY-SIX, AND AMENDMENTS TO THE CODES.

Copies of all the laws passed at the last session of the Legislature, with marginal notes, and properly indexed, were delivered to the Superintendent of State Printing, as soon after the adjournment of the Legislature as possible, and on the receipt of the bound volumes by me were disposed of as provided for in section four hundred and nine, Political Code. The following is a statement thereof:

Number of Statutes received from State Printer.....		2,249
Number of Statutes distributed.....	1,659	
Number of Statutes sold.....	51	1,710
Number of Statutes on hand July 1st, 1877.....		539
Number of Amendments to the Codes received from the State Printer.....		2,241
Number of Amendments to the Codes distributed.....	1,660	
Number of Amendments to the Codes sold.....	58	1,718
Number of Amendments to the Codes on hand July 1st, 1877.....		523
Amount received from sales as above, and paid State Treasurer.....		\$161 00

The enrolled laws of the twenty-first session have been properly bound, and are on file in the office. I would call the attention of your Excellency to the condition the said enrolled laws were in when delivered to this office. Erasures, made with knife and pen; and interlineations, not always in the same handwriting as the balance of the law. This should not be allowed, for they are calculated to give rise to surmises as to *when*, *where*, and by *whom* such changes

were made, and might result in great wrong to some innocent party. I would also report to your Excellency that several reports of committees, petitions, and other papers presented to the last Legislature, have not been filed in this office since the close of the session, as required by section two hundred and sixty-one, Political Code.

The Journals of the Senate and Assembly, and Appendices complete in five volumes, have been received from the Superintendent of State Printing, and distributed as required by law, and such as remained turned over to State Library.

The indexing of the Journals of the Senate and Assembly has heretofore been done under an appropriation for that purpose, the sum of four hundred and fifty dollars having been allowed for that work to my predecessors. No appropriation having been made for that purpose by the last Legislature, the work (which has heretofore been done by others) I was compelled to have done in my office by one of the regular clerks, at a time, too, when the whole force of the office was required in the performance of other duties. This fact, together with the numerous errors in the preparation of the Journals for the printer, made the task very difficult and necessarily somewhat incomplete.

The official acts of the Governor have been duly attested and a register kept of the same, as well as proper records made and kept of all the business of the office, as required by law.

STATE GEOLOGICAL SURVEY.

The following is a report of my proceedings under the law authorizing the distribution of the reports of the State Geological Survey. (See pages 55 and 924, Statutes 1871-2):

Number of volumes received from my predecessor.....	198
Distributed upon the order of your Excellency, to the Library of Congress, Washington, D. C., Vol. 2, Paleontology, and Vol. 1, Ornithology.....	2
To Agassiz Institute, Sacramento, California, one full set of the survey.....	5
To Cornell University, Ithaca, New York, one full set of the survey.....	5
To Hon. — McDonald, British Parliament, one full set of the survey.....	5
To Hon. Augustus Morris, New South Wales, one full set of the survey.....	5
To California State Geological Society, San Francisco, one full set of the survey.....	5
To G. M. Levette, State Geologist, Indiana, one volume Ornithology.....	1
Sold for cash, 1 Vol. "Yosemite Guide".....	1
	29
Number of volumes on hand July 1st, 1877.....	169
Amount received for sale of report as above, and paid State Treasurer.....	\$5 00

By an Act of the Legislature, approved March twenty-seventh, eighteen hundred and seventy-four, the State Geological Survey was discontinued.

LAWS IN SPANISH.

"The translation of the laws into Spanish and their distribution is under the control of the Secretary of State." After advertising, as the law directs, for proposals for translating the laws of the twenty-first session into Spanish, a joint committee of both Houses of the Legislature met at my office, on the first Monday in February, eighteen and seventy-six, and opened the bids submitted, and awarded the contract to José F. Godóy, at sixteen cents per folio for translat-

ing, preparing the index, and correcting the proof sheets for the printer.

To meet the bills for this work the Legislature, then in session, appropriated the sum of two thousand five hundred dollars.

After the work had been completed, the translator sent in his bill for two thousand three hundred and eleven dollars and eighty-four cents, which sum he seems to have arrived at from his allowance for similar services rendered in the translation of the laws of the session of eighteen hundred and seventy-three and eighteen hundred and seventy-four, but as the law requires me to certify to his account, I deemed it my duty to count the folios, which, upon doing, I found that, at sixteen cents per folio, the account would amount to one thousand three hundred and seventy-five dollars and thirty-six cents, being nine hundred and thirty-six dollars and forty-eight cents less than the bill presented, and one thousand and eighty-seven dollars and seventy-two cents less than the amount allowed for the translation of the laws of eighteen hundred and seventy-three and eighteen hundred and seventy-four. The account, as corrected, was certified by me to the Board of Examiners.

The appropriation for the work was.....	\$2,500 00
Amount allowed for the translation.....	1,375 36
Balance unexpended.....	\$1,124 64

The bound volumes of the laws in Spanish were received by me from the Superintendent of State Printing on the eighteenth of May, eighteen hundred and seventy-six, and have been distributed according to law, and the copies left on hand turned over to the State Library.

SUPREME COURT REPORTS.

A statement of the receipts and disposition of the California Reports during my term:

Number of volumes received from my predecessor.....	5,872
Received from A. L. Baneroft & Co., for Modoc County.....	120
Received from A. L. Baneroft & Co., 50th volume Reports.....	300
Received from A. L. Baneroft & Co. 51st volume Reports.....	300
	6,592
Number of volumes distributed according to law.....	1,029
Number of volumes sold	22
	1,051
Number of volumes on hand July 1st, 1877.....	5,541
Amount received from sales as above and paid State Treasurer.....	\$66 00

CONTINGENT FUND.

Amount of appropriation for twenty-seventh fiscal year:

On hand December 6th, 1875.....	\$87 50
Appropriation for twenty-eight fiscal year.....	100 00
Total	\$187 50

I have expended this amount in the purchase of ice, newspapers, towels, soap, etc., for the use of the office.

POSTAGE, EXPRESSAGE, TELEGRAPH, AND HAULING ACCOUNT, FROM
DECEMBER SIXTH, EIGHTEEN HUNDRED AND SEVENTY-FIVE, TO
JUNE THIRTIETH, EIGHTEEN HUNDRED AND SEVENTY-SEVEN.

On distribution of California Codes.....	\$10 96
On distribution of 49th California Reports.....	122 40
On distribution of 50th California Reports.....	124 32
On distribution of Statutes and Amendments to Codes 1875-6.....	1,195 82
On distribution of Appendices, twenty-first session.....	630 24
On distribution of Senate and Assembly Journals.....	137 64
On distribution of 51st California Reports.....	57 60
On distribution of Statutes and Amendments, in Spanish, 1875-6.....	18 91
	<hr/>
	\$2,297 89
Reduced to gold coin basis.....	<hr/>
	\$2,143 35
On miscellaneous books and documents sent from office.....	69 33
For office postage, stamps, post-office box rent, etc.....	189 60
On packages, documents, etc., received at office.....	159 75
On box and package of books to Modoc County.....	12 93
To Western Union Telegraph Company.....	85 05
For hauling books, etc.....	17 25
	<hr/>
Total expenses for nineteen months.....	\$2,677 26
Amount of appropriation for deficiency of the twenty-seventh fiscal year unexpended December 6th, 1875.....	\$397 98
Deficiency June 30th, 1876.....	165 16
	<hr/>
	563 14
Appropriation for the twenty-eighth fiscal year.....	1,400 00
Deficiency June 30th, 1877.....	714 12
	<hr/>
	2,114 12
	<hr/>
	\$2,677 26
By reference to the biennial report of my predecessor for the corresponding nine- teen months of his term, I find the total postage and express expenses to be.....	4,612 22
During the nineteen months of my term, as above set forth.....	2,677 26
	<hr/>
Decrease in favor of my term.....	\$1,934 96

On the twenty-seventh of January, eighteen hundred and seventy-six, the Legislature made an appropriation of eleven hundred dollars to cover the deficiency in the postal account of this office for the twenty-seventh fiscal year, and the probable expenses for the balance of the year. Of this amount seven hundred and two dollars and two cents was used in the payment of bills that had accrued prior to the commencement of my term (December sixth, eighteen hundred and seventy-five), leaving a balance of only three hundred and ninety-seven dollars and ninety-eight cents for the use of this office for the remaining seven months of the fiscal year, during which time, most of the session laws, journals, and appendices of the Legislature in session that year, were distributed. Of the "two thousand six hundred and seventy-seven dollars and twenty-six cents" herein reported as expended, "thirteen hundred and sixty-seven dollars and eighty-nine cents" was actually expended prior to the first of July, eighteen hundred and seventy-six, being nine hundred and sixty-nine dollars and ninety-one cents more than the balance on hand of the aforesaid appropriation for deficiency of the twenty-seventh fiscal year.

The law makes it the duty of the Secretary of State to distribute the laws, resolutions, journals and appendices, of each session of the

Legislature, as well as the decisions of the Supreme Court, as soon as they are bound and received by him.

The State Controller rules that when an appropriation is made to cover certain expenses of an office for two fiscal years, the officer has no right to incur a greater liability during the first year than will be met by one-half of such appropriation; and if he does incur such liability, that the same cannot be paid out of the appropriation for the succeeding year, but becomes the subject for an appropriation by the Legislature. Without questioning the correctness of this ruling, I would simply call attention to the position in which it places the Secretary of State. It is made his duty to distribute the laws, journals, etc., *as soon as received*; but, if the expense attending their distribution exceeds the half of the appropriation, then he must *stop*—distribute no more books, send no more letters, nor transact any other business in his office, upon which postage or expressage is required to be paid, until the commencement of the next fiscal year, or else do the work on credit and take his chances of the next Legislature making an appropriation for the deficiency.

The appropriation made by the last Legislature for the twenty-eighth and twenty-ninth fiscal years was the sum of twenty-eight hundred dollars, and although my report shows a deficiency of eight hundred and seventy-nine dollars and twenty-eight cents up to the close of the twenty-eighth fiscal year. Had the appropriation been expended in the payment of the bills as they accrued, there would still have been a balance of five hundred and twenty dollars and seventy-two cents of that appropriation unexpended, and all bills paid to date; but, by the ruling aforesaid, no portion of the fourteen hundred dollars reserved for the twenty-ninth fiscal year could be used in the payment of bills that had accrued during the previous fiscal year, consequently the whole amount of said fourteen hundred dollars remains unexpended, and a deficiency for the twenty-seventh and twenty-eighth fiscal years appears in the report.

The expenditures of this office are of necessity always much greater during the fiscal years the Legislature is in session, for it is in those years that the session laws, journals, etc., are mostly distributed, and most of the stationery, wood, coal, and gas is used; and I would suggest that it would be better for the Legislature to make separate appropriations—one for distribution of books, and another for office postage, expressage, telegraphing, etc.—for certain amounts to meet these expenses, and that the same be paid out as the expenses accrue. Then, if the appropriations should prove insufficient for the two years, the deficiency would accrue at the close of the second fiscal year and the parties of whom credit had been obtained would not have to wait a year or two for their pay.

I am in constant receipt of letters from different parts of the State, also from parties in various portions of the Union, and even foreign States, asking for statistics, and every conceivable variety of information relative to this State; also, for copies of official and other reports, and even statutes, geological reports, codes, etc., and scarcely any of these requests are accompanied with the requisite stamps to cover postage. A simple acknowledgment of even half of these communications would occupy a large portion of the time of one clerk, but believing that in giving the information asked for would, in many cases, tend to reflect credit on our State, I have, in every instance where it was possible, given such information as I

had, or could obtain, and sent such reports and pamphlets as were obtainable, and I find that the postage account of the office has been considerably increased thereby.

The great State of California attracts considerable attention from her sister States, and I should judge occupies an enviable position with some of them, for I have been honored with the receipt of letters from representatives of more than one of the older States of the Union, asking for copies of certain of our laws, with the view of using them in the drafting of similar ones for adoption in their States. Owing to the fact that there is no office in the State where general information, of a reliable character, relative to the various interests of our State, can be obtained, I have found it very difficult and, in many instances, impossible to answer letters satisfactorily, several of which have been forwarded by me to the "California Emigrant Union," San Francisco, the general agent, W. H. Martin, having kindly offered to render such assistance in his power in obtaining information. The law makes it the duty of County Assessors to make reports to the State Board of Equalization and Surveyor-General, but these reports relate only to certain portions of the various interests of the State upon which information is required, and from the manner in which the information contained in these reports is obtained by the County Assessors, must necessarily be incomplete and not reliable even as to those important interests. It seems to me that the establishment of a "Statistical Bureau" in this State, where every variety of reliable information relative to the interests of the State could be obtained, would be of great advantage, not only from the benefits therefrom to its citizens, but also as a means of information to the people of other countries contemplating making California their future home, or of making investments therein.

STATE SEALER OF WEIGHTS AND MEASURES.

The law makes it the duty of the Secretary of State, as "State Sealer of Weights and Measures," to deposit in the office of the County Sealers of the several counties of this State copies of the original standards in his charge at the expense of the counties. (See Section 561, Political Code.)

No application having been made to me, and learning from the last biennial report of my predecessor that but twelve of the counties of the State had been provided with copies of the legal standards, I adopted the plan of my predecessor, by addressing to the County Clerks of each of the counties of the State not reported as provided with the proper standards a copy of the following circular:

STATE OF CALIFORNIA—DEPARTMENT OF STATE, }
Sacramento, February 1st, 1877. }

To -----, County Clerk, ----- County:

SIR: Your attention is specially called to the following sections of the Political Code relative to "Sealers of Weights and Measures:"

SECTION 561. The State Sealer of Weights and Measures has the general supervision of the weights and measures of the State. He must take charge of the standards, and see that they are kept in, and in no case removed from, a fire-proof vault in his office, except for the purpose of comparing and copying. He must correct the standards of the cities and counties, provide them with the necessary standards, balances, and other means of adjustment, and as often as once in ten years compare the same with those in his possession.

SECTION 563. The County Sealers must keep in their offices the standards of weights and measures for their respective counties.

SECTION 564. Copies of the original standards, to be made of such materials as the State Sealer directs, must be deposited by him in the office of the County Sealers of the several counties of this State, at the expense of the counties, which are severally responsible for the preservation of the copies respectively delivered to them.

SECTION 565. The State Sealer must cause to be impressed on each of the copies of such original standards the letter "C," and such other device as he may direct for the particular county, which device must be recorded in the State Sealer's office, and a copy thereof delivered to the respective County Sealers.

You will see by section five hundred and sixty-three that it is *your duty* to keep a copy of the standards of weights and measures in your office; and by section five hundred and sixty-four that it is made *my duty* to furnish them at the *expense of the county*.

It would be extremely disagreeable for me to furnish copies of the original standards to the county, as required by said section five hundred and sixty-four, without a request from the proper authorities, and to furnish them without any assurance of their being paid for on delivery would be entirely out of the question.

I would, therefore, earnestly request that you present the matter to your *Board of Supervisors* at as early a day as possible, that they may take such action as may to them seem proper in relation thereto, and notify me of the result at your earliest convenience.

Very respectfully,

THOMAS BECK,
Secretary of State.

Out of the thirty-nine County Clerks thus addressed, nine of them replied to the effect that they had presented the matter to their respective Boards of Supervisors, but that they either declined to act, or had laid the matter over for future consideration. The other thirty County Clerks made no response whatever.

The fact is, that the law as it now stands is entirely inoperative, and unless amended had better be repealed altogether, for while it makes it the duty of the State Sealer to deposit copies of the standards with each County Sealer in the State, and the County Sealer's duty to compare all weights and measures *which are brought to them for that purpose* with the copies of the standards in his office, it does not require that parties using weights and measures should have them compared with the legal standards and properly stamped, but leaves it entirely optional with them whether they shall do so or not.

During the month of June of the present year several sets of weights were sent to me from different parties in San Francisco for adjustment, giving as a reason for their sending them to me that the County Sealer of San Francisco had no balances, and that his weights were incorrect.

Not being provided by the State with balances of any kind whatever, in order to compare the weights sent with the original standards kept in my office I was compelled to use the balances of an assayer of this city, living at quite a distance from my office, and after I had completed the work, and returned the weights to their owners, I was informed that the adjustments made by me were not correct.

Your Excellency will see the absolute necessity of either repealing the law entirely or having it properly amended, and the State Sealer's office furnished with *all* the instruments necessary to a proper discharge of his duties in the general supervision of the weights and measures of the State.

STATIONERY, LIGHTS, AND FUEL FUND.

The following sums have been allowed out of this fund :

For wood	\$4,552 85
For coal and kindling.....	1,729 82
For gas.....	6,149 64
For water.....	300 00
For stationery, etc.....	10,440 42
	<hr/>
	\$23,172 73

APPROPRIATIONS.

Amount unexpended of the appropriation for the twenty-seventh fiscal year, on hand December 6th, 1875.....	\$1,478 00
Amount returned by Act of Legislature of January 27th, 1876, on account of money drawn from said fund for the purchase of ballot paper.....	6,370 00
	<hr/>
	\$7,848 00
Deficiency June 30th, 1876.....	7,251 11
	<hr/>
Total expenditure of the twenty-seventh fiscal year, from December 6th, 1875, to June 30th, 1876, inclusive.....	\$15,099 11
	<hr/>
Appropriation for the twenty-eighth fiscal year.....	\$12,500 00
Amount expended to June 30th, 1877.....	8,073 62
	<hr/>
Balance unexpended June 30th, 1877.....	\$4,426 38

The foregoing statement shows that from December sixth, eighteen hundred and seventy-five, to June thirtieth, eighteen hundred and seventy-six, (seven months), the expenditures for wood, coal, kindling, gas, water, stationery, etc., amounted to the sum of fifteen thousand and ninety-nine dollars and eleven cents, nearly double what it amounted to for the succeeding *twelve* months. Of this amount, five thousand seven hundred and eighty-six dollars and forty-nine cents was for stationery furnished the members and officers of the Legislature, and seven thousand three hundred and seventy dollars for wood, coal, and gas consumed during the four months that the Legislature was in session, showing that with this account, as well as with the postal account, the greater portion of the expenses of this office accrue during the fiscal years in which the Legislature is in session, and that the manner in which the appropriation for these expenses is required to be paid out works a hardship on parties doing business with this department, and tends to injure the credit of the State. The appropriation should be made payable as the expense is incurred, and then, if insufficient for the two years, the deficiency would accrue during the second year, and then parties would not have to wait so long for their pay.

The amount charged for stationery, etc., delivered, upon requisitions duly signed, to the State officers, members of the Legislature, and officers, clerks, and committees thereof, and State Boards of Commissioners, from December sixth, eighteen hundred and seventy-five, to June thirtieth, eighteen hundred and seventy-seven, both inclusive, is as follows:

To the State officers, including Governor, Lieutenant-Governor, Controller, Treasurer, Attorney-General, Surveyor-General, Adjutant-General, Clerk of the Supreme Court, Superintendent of Public Instruction, Superintendent of State Printing, State Library, Supreme Court, Supreme Court Reporter, Janitor and Gardener, State Board of Equalization, State Land Commissioners, State Board of Health, State Board of Transportation Commissioners, and Senate Committee on Chinese matters.....		\$4,482 70
Members of Senate.....		724 72
Officers and attachés of Senate.....		1,874 84
Members of Assembly.....		1,465 06
Officers and attachés of the Assembly.....		1,721 87
Total amount delivered.....		\$10,269 19

I have kept separate accounts with each party from whom purchases have been made, and with each of the various departments to whom I am required to furnish stationery, etc., so that the amount of each one's account can be seen at a glance, as well as the quantity and cost of each article purchased, and it appears from said accounts that the total amount expended is the sum of twenty-three thousand one hundred and seventy-two dollars and seventy-three cents, as above reported; that, of that amount, twelve thousand seven hundred and thirty-two dollars and thirty-one cents was expended for wood, coal, kindling, gas, and water; also, the following sums, to wit: seventy-two dollars for work on vault in Treasurer's office, and fixing clock in Secretary of State's office; ten dollars and seventy-five cents for cleaning and repairing guns in Treasurer's office; twelve dollars and ninety-four cents for fixing dies for Great Seal and stencil plates; twenty-six dollars and fifty cents for work in the offices of the Governor, Adjutant-General, Superintendent of Public Instruction, and Secretary of State; one hundred and fifteen dollars for money bags for Treasurer's office; nine hundred and ninety-five dollars for making cases and desks for the Governor and Surveyor-General's offices; two hundred and sixty-five dollars and fifty cents for repairing furniture in the rooms of the Supreme Court and Judges—making a total of one thousand four hundred and ninety-seven dollars and sixty-nine cents, which, so far as the fitness of things are concerned, might as well have been allowed out of the appropriation for the support of the "State Militia." In addition to these I find charged to said "Stationery, etc., Fund" two hundred dollars and thirty cents for gas pipes, burners, chimneys, shades, gas lighters, basin cocks, etc.; twenty-seven dollars and fifty cents for pitchers and glass tumblers; eighty-six dollars and fifty-three cents for mops and handles, hatchets, twine, letter scales, scrubbing brushes, hammers, knives and cutters for lawn mowers, tacks, and screw rings; six hundred and fifty-nine dollars and fifty-eight cents for brooms, brushes, feather dusters, sponge, matches, soap, candles, chamois skins, alcohol, varnish, lard oil, turpentine, and kerosene—making the further sum of nine hundred and seventy-three dollars and ninety-one cents for articles that would require a wonderful imagination to construe into stationery; yet all of these bills, amounting in the aggregate to two thousand four hundred and seventy-one dollars and sixty cents, are allowed and paid for out of the appropriation for stationery, lights and fuel, and have to be reported as stationery, when in point of fact, out of the total sum of twenty-three thousand one hundred and seventy-two dollars and seventy-three cents charged to this fund, only seven thousand nine hundred and sixty-eight dollars and eighty-two cents have been expended for what could properly be called sta-

tionery. It seems to me that it would be proper to separate this fund, and make appropriations for each class of expenses separate.

At the last session of the Legislature a resolution was adopted by the Senate, which reads as follows:

Resolved, That the Secretary of State issue stationery to members and officers of the Senate only upon a written requisition, * * * and he is hereby directed to keep a special and separate account with each, and report to the Senate the amount furnished each member or officer at such times as the Senate may direct. He is also directed to publish each account in his next biennial report, in such form as to show how much stationery each member or officer drew during the session.

In compliance with said resolution, I herewith append a statement of the amount of stationery drawn by each member and officer of the Senate during the session of eighteen hundred and seventy-five and eighteen hundred and seventy-six:

Names of Senators.	Amount.	Names of Senators.	Amount.
James A. Johnson, President.....	\$11 83	E. J. Lewis.....	\$31 77
W. Z. Angney.....	13 81	Tipton Lindsey.....	11 68
Washington Bartlett.....	21 93	Noble Martin.....	13 96
James Beazell.....	15 50	Timothy McCarthy.....	53 57
C. W. Bush.....	11 81	Frank McCoppin.....	25 25
James Craig.....	15 75	H. E. McCune.....	11 95
M. J. Donovan.....	10 40	Robert McGarvey.....	26 10
W. A. Eakin.....	14 32	J. W. Montgomery.....	15 05
Henry Edgerton.....	27 15	Edward Nunan.....	28 87
George S. Evans.....	16 35	Miles P. O'Connor.....	7 06
J. T. Farley.....	19 71	Wm. M. Pierson.....	17 49
Thomas Flint.....	22 21	Philip Roach.....	30 47
Thomas Fraser.....	7 16	G. H. Rogers.....	22 89
Edward Gibbons.....	15 50	J. W. Satterwhite.....	15 61
W. J. Graves.....	45 22	Paul Shirley.....	14 80
Creed Haymond.....	16 37	S. Spencer.....	6 00
W. C. Hendricks.....	7 92	W. J. Tinnin.....	9 54
Wm. McPherson Hill.....	11 94	H. K. Turner.....	15 05
S. G. Hilborn.....	11 54	B. F. Tuttle.....	16 11
R. Hopkins.....	16 07		
Robert Howe.....	16 46		\$724 72
Thos. H. Laine.....	2 55		
Officers and Committees of Senate.	Amount.	Officers and Committees of Senate.	Amount.
Secretary of Senate.....	\$209 97	San Francisco delegation.....	\$42 44
Sergeant-at-Arms.....	560 58	Committee on Corporations.....	45 51
Journal Clerk.....	33 00	Committee on Buildings, etc.....	53 53
Minute Clerk.....	94 70	Committee on State Prison.....	49 11
Enrolling Clerk.....	193 29	Committee on Tide Lands.....	1 25
Engrossing Clerk.....	150 62		
Copying Clerks.....	100 60	Total to officers and committees.....	\$1,874 84
Postmaster.....	36 04	Amount issued to Senators.....	724 72
Paper Folder.....	89 87		
Judiciary Committee.....	124 28	Total amount issued to all.....	\$2,599 56
Reporters of both Houses.....	90 05		

By reference to the report of my predecessor for the nineteen months ending June thirtieth, eighteen hundred and seventy-three, it will be seen that the amount allowed from the "Stationery, Lights and Fuel Fund" was as follows:

For wood, coal, gas, and water	\$16,212 85
For State officers, Commissioners, etc.	8,438 92
For Members of Senate, officers and attachés, 1871-2	7,410 41
For Members of Assembly, officers and attachés, 1871-2	9,537 71
For Supreme Court Reports, State Seal Press Stand, etc.	438 25
Total	\$42,038 14
Total amount allowed during my term, as herein reported (see page 17)	23,172 73
Decrease in favor of present term	\$18,865 41

REPORTS OF FEES OF COUNTY OFFICERS.

Section four hundred and eight, Political Code, provides that the Secretary of State shall "notify, in writing, the District Attorney of the proper county of the failure of any officer in his county to file in his office (Secretary of State) the sworn statement of fees received by such officer," as required by an Act of the Legislature, "to regulate fees of officer," approved March fifth, eighteen hundred and seventy, and which Act, or sections referred to, were not affected by the Codes.

This law not having been complied with by more than two or three officers whose duty it is, under said law, to file statement of fees in this office, I made an examination of the law and found that it was still in force as to several of the counties of the State, but the failure to comply with its provisions being so general, I concluded the impression of those officers must be that the law had been repealed, or superceded by the Codes; so on the first day of March, eighteen hundred and seventy-seven, I forwarded to the County Clerks of the several counties still affected by the law, copies of the following "circular: "

STATE OF CALIFORNIA—DEPARTMENT OF STATE, }
SACRAMENTO, March 1st, 1877. }

To the County Clerk of ----- County:

DEAR SIR: I would respectfully call your attention to Section 48 of "An Act to regulate fees of office and salaries of certain officers," etc., etc., approved March 5th, 1870 (see page 181, Statutes 1869-70), which requires reports to be made by certain officers to you, and by you to this department.

As but few of the County Clerks have made the required reports to this office, it is presumable that the impression is, that the adoption of the Codes repealed that law. This is not the case, however, for the law referred to has been in no respect altered or repealed by the Codes; and, by Section 49 of said Act, and Subdivision 12 of Section 408, Political Code, it is made my duty to notify the District Attorney of the proper county of the failure of any officer in his county to comply with the law above referred to. You will please make the required returns to this department, and also notify me of delinquencies on the part of any officer of your county required to make report to you.

Very respectfully,

THOMAS BECK,
Secretary of State.

The reply I received to the foregoing, from the officers addressed (with one or two exceptions), was to the effect that the general impression prevailed that the law had been repealed, or superceded, by subsequent laws, but since the issuance of the circular nearly all of the parties notified have complied with the law, and filed the required statements.

Subsequent laws having been passed relating to fees, for several of the counties of the State, which the parties claim as having repealed or superceded sections forty-eight and forty-nine of the Act referred to in my circular, and there being a doubt as to what counties *are* still affected by the law (there being so many exempted from its pro-

visions either by direct enactment or inference), I would respectfully suggest that said sections forty-eight and forty-nine should be repealed; or, if not repealed, so amended as to include *all* the counties in the State, as I understand the object of the law was that the Legislature might have at hand, for reference, some reliable information relative to the amount of business done by the several county officers of the State, when called upon to amend fee bills, or pass new laws relative to the fees or salaries of any of said officers.

CERTIFICATES OF OFFICIAL CHARACTER.

I would respectfully call the attention of your Excellency to the fact that I am in the constant receipt of papers and documents certified to by County Clerks, accompanied with the request that I append a certificate, with the Great Seal of State attached, of the official character, etc., of the Clerk, for purposes of evidence in foreign States and countries. Prior to the adoption of the Codes, the election of County Clerks was certified to the Secretary of State, as well as of County Judges, and they were also commissioned by the Governor; but the Codes left "County Clerks" out, and since their adoption the Secretary of State has no official knowledge of County Clerks, and consequently cannot give the required certificate, the want of which has frequently caused much trouble and expense, as well as loss of time. In view of the fact of the importance of the Secretary of State being able to certify to the official character of County Clerks, in order that parties may be able to conform to the requirements of the laws of other States and countries relative to the authentication of documents, records, etc., I would suggest that "section twelve hundred and eighty-eight, Political Code," be so amended as to include "County Clerks" in the returns required to be made to the Secretary of State, and that they be commissioned by the Governor, as was the law prior to the adoption of the Codes. And, in view of the fact that the Secretary of State is frequently called upon to certify, not only to the official character of an officer, but also that the signature affixed to the document sent is his genuine signature, and there being nothing now on the statute books of the State requiring it, no *official* knowledge of that fact can be obtained from the Secretary of State's office. I would therefore most respectfully suggest that "section nine hundred and nine, Political Code," be amended so as to cover that want, or a law passed requiring each and every officer commissioned by the Governor, as soon as he has qualified according to law, to transmit a copy of his official oath, signed with *his own proper signature*, to the office of the Secretary of State.

STATE CAPITOL.

By "section four hundred and twelve" of the Political Code, it is made my duty as "Superintendent of the State Capitol, to take charge of the building and keep the same, together with the property therein, in good order and repair." While I have endeavored, to the best of my ability, to discharge this duty to the best interest of the State, and at as little expense as possible, the charge has been attended with no small amount of care and responsibility on my part, and with continual watchfulness and labor on the part of the Janitor and his assistants, who have relieved me from the "care in detail" of the building and

furniture. This labor has been greatly augmented by reason of the fact that many evil-disposed and mischievous persons, mostly boys, were in the habit of congregating in the dome, and the passage-ways thereto, and defacing and disfiguring the walls with obscene and improper writing. On this account I have been obliged to keep the door leading to the dome locked, refusing admission to any one without first obtaining a permit. For the same reasons I have deemed it necessary to keep the building closed on Sundays.

Most of the repairs needed in and about the building, such as stopping leaks in, and repairing gas and water pipes, putting up basins, water-cocks, fixing hose, mowing machines, and pipes and machinery in the engine room, which repairs have always heretofore been done by outside workmen, at a heavy cost to the State, have been made by the Engineer and Janitor's assistant, involving the State in no outlay whatever, save the cost of the raw material. The work in the engine room alone, if done in the usual way, would have cost over one thousand dollars. The manner in which the building has been managed I know has challenged, and I think deserves, general commendation.

In conclusion, I hereto append a statement, showing the expenditures of this department during the nineteen months of my term, as hereinbefore set forth, and the expenditures of the corresponding nineteen months of my predecessor's term, and giving the difference in the expenses and *receipts* of the two terms.

	Nineteen months, preceding term.	Nineteen months, present term.	Decrease of ex- penses during present term.
For wood, coal, gas, and water.....	\$16,212 85	\$12,732 31	\$3,480 54
For stationery to State officers and others....	8,130 50	4,482 70	3,647 80
For stationery to Senate and attachés.....	7,410 41	2,599 56	4,810 85
For stationery to Assembly and attachés....	9,537 71	3,186 93	6,350 78
For sundries to stationery account.....	746 67	171 23	575 44
For postage, expressage, etc.....	4,612 22	2,677 26	1,934 96
For translating laws into Spanish.....	2,463 08	1,375 36	1,087 72
For indexing Journals, Senate and Assembly..	450 00	-----	450 00
	\$49,563 44	\$27,225 35	\$22,338 09
Amount of fees received.....	\$11,044 55	\$20,931 40	-----
Increase of receipts in present term.....	-----	-----	\$9,886 85
Making a total in favor of the present term of..	-----	-----	\$32,224 94

To which might be added the saving to the State, in the way of repairs in and about the building, amounting, at least, to the sum of fifteen hundred dollars.

STATE OF CALIFORNIA, }
 County of Sacramento. } ss.

THOMAS BECK, Secretary of State of the State of California, being duly sworn, on his oath says, that the foregoing report contains a detailed account of all his official actions as Secretary of State (except of such as relate to ex officio duties), since the commencement of his term of office (December sixth, eighteen hundred and seventy-five), up to and including the thirtieth of June, eighteen hundred and seventy-seven, and particularly a detailed statement of the manner in which all appropriations for his office have been expended, to the best of his knowledge and belief.

THOMAS BECK.

Subscribed and sworn to before me this thirty-first day of July, A. D. eighteen hundred and seventy-seven.

[SEAL.]

JOHN P. POOLE,
 Deputy Clerk, Supreme Court.

BIENNIAL REPORT

OF THE

Controller of the State of California,

FOR THE

27th and 28th Fiscal Years, Commencing July 1st, 1875, and Ending June 30th, 1877.

TRANSMITTED TO THE GOVERNOR SEPTEMBER 27, 1877.

REPORT.

OFFICE OF CONTROLLER OF STATE, }
SACRAMENTO, September 27th, 1877. }

To His Excellency,
WILLIAM IRWIN,
Governor of California:

SIR: In accordance with section four hundred and thirty-three of the Political Code, I give herewith the financial operations of this office for the twenty-seventh and twenty-eighth fiscal years, embracing the period of time from July first, eighteen hundred and seventy-five, to June thirtieth, eighteen hundred and seventy-seven (both days inclusive), and also such estimates of expenditures as I am by law required to make, together with some suggestions which seem to me pertinent to the occasion.

Tables containing detailed statements of receipts, expenditures, etc., will be found in the Appendix, arranged as follows:

INDEX.

1 AND 2.

Receipts for the twenty-seventh and twenty-eighth fiscal years.

3 AND 4.

Expenditures for the twenty-seventh and twenty-eighth fiscal years.

5.

Property tax collected for the State, in the several counties, under assessment of eighteen hundred and seventy-five and six.

6.

Property tax collected for the State, in the several counties, under assessment of eighteen hundred and seventy-six and seven.

7.

State tax due from counties, amounts collected and amounts delinquent for and on account of assessment of property tax of eighteen hundred and seventy-five and six.

8.

State tax due from counties, amounts collected and amounts delinquent for and on account of assessment of property tax of eighteen hundred and seventy-six and seven.

Balance sheets showing the condition of the several funds.

10.

Detailed statement of the condition of the estates of deceased persons, held in trust by the State.

11 AND 12.

Financial reports of counties for the twenty-seventh and twenty-eighth fiscal years.

13 AND 14.

Auditors' statements of amounts charged Tax Collectors, etc., for the twenty-seventh and twenty-eighth fiscal years.

15 AND 16.

Delinquent taxes charged Tax Collectors for twenty-seventh and twenty-eighth fiscal years.

17 AND 18.

Statements of commissions and mileage allowed for twenty-seventh and twenty-eighth fiscal years.

19.

Statement of contingent expenses of Senate for eighteenth, nineteenth, twentieth, and twenty-first sessions.

20.

Statement of contingent expenses of Assembly for eighteenth, nineteenth, twentieth, and twenty-first sessions.

21.

Valuation of property and rate of taxation from the first to the twenty-eighth fiscal year inclusive.

22.

Balances in the several funds, amount of warrants outstanding, and balances in State treasury June thirtieth, eighteen hundred and seventy-seven.

23 AND 24.

Receipts into and disbursements from the State School Fund.

25.

Estimate of expenditures for the thirtieth and thirty-first fiscal years, ending June thirtieth, eighteen hundred eighty.

RECEIPTS AND EXPENDITURES.

From the tabular statements of receipts into the treasury, it will be seen that the receipts were:

Twenty-seventh fiscal year, 1875-6	\$3,651,895 39
Twenty-eighth fiscal year, 1876-7	4,549,258 30
Total	\$8,201,153 69

EXPENDITURES.

Twenty-seventh fiscal year, 1875-6	\$3,961,964 18
Twenty-eighth fiscal year, 1876-7	3,785,111 35
Total	\$7,747,075 53
Excess of receipts over expenditures	\$454,078 16

The principal sources of receipts were:

SOURCE.	27th Fiscal Year.	28th Fiscal Year.
Property tax-----	\$3,141,277 01	\$3,948,032 16
School lands—"Principal and Interest"-----	160,537 17	201,397 33
Harbor Commissioners—from rent of wharves and docks in San Francisco-----	253,322 63	305,903 09
Fees paid in by State officers-----	34,582 73	44,698 46
Tide lands-----	40,344 59	475 90
Reclamation tax—Levee District No. 5, Sutter County-----	1,177 94	32,676 69
All other sources-----	20,653 32	16,074 67
	\$3,651,895 39	\$4,549,258 30

For a more detailed account, see Statements Nos. 1 and 2, in the Appendix, accompanying this Report.

For sources of expenditures, reference is made to Statements Nos. 3 and 4 in the Appendix, where they will be found arranged under their proper headings and appropriations.

GENERAL FUND.

The General Fund receipts were:

SOURCE.	27th Fiscal Year.	28th Fiscal Year.
Balance on hand July 1, 1875-----	\$39,548 28	
Receipts-----	1,696,213 82	\$2,363,713 77
Warrants canceled-----		179 50
Total receipts-----	\$1,735,762 10	\$2,363,893 27

The General Fund expenditures were:

PURPOSE.	27th Fiscal Year.	28th Fiscal Year.
Payment of canceled warrant-----	\$40 82	
Transfer to Folsom Branch Prison Fund-----	85,494 73	
Transfer to Swamp Land Fund-----		\$47,923 24
Warrants issued-----	2,048,177 65	1,587,630 19
Total expenditures-----	\$2,133,713 20	\$1,635,553 43

Receipts for two years-----	\$4,099,655 37
Expenditures for two years-----	3,769,266 63
Excess of receipts over expenditures-----	\$330,388 74

At the beginning of the twenty-seventh fiscal year there was in the General Fund the sum of thirty-nine thousand five hundred and forty-eight dollars and twenty-eight cents; at the end of the twenty-eighth fiscal year there was an unexpended balance of three hundred and thirty thousand three hundred and eighty-eight dollars and seventy-four cents.

SCHOOL FUND.

The amount reported by this office to the Superintendent of Public Instruction subject to apportionment for the support of Common Schools, from February twenty-fourth, eighteen hundred and seventy-five, to and including February twenty-first, eighteen hundred and seventy-seven, was two million seven hundred and ninety-two thousand six hundred and eighty-eight dollars and forty-three cents, which amount was received from the following sources:

SOURCE.	27th Year.	28th Year.
Balance of February, 1875, apportionment not distributed	\$54 47	
Interest on school lands	* 62,836 85	\$106,557 49
Interest on bonds held in trust by the State Treasurer	104,864 30	107,760 00
Property tax	1,149,828 97	1,260,540 65
Sale of Geological Reports	245 70	
	\$1,317,830 29	\$1,474,858 14

The amount apportioned for each scholar was seven dollars and sixty-eight cents for the year ending February twenty-second, eighteen hundred and seventy-six, and seven dollars and ninety-eight cents for the year ending February twenty-first, eighteen hundred and seventy-seven. The whole amount distributed during those two years, was two million seven hundred and ninety-two thousand two hundred and four dollars and ten cents, leaving a balance in the School Fund February twenty-first, eighteen hundred and seventy-seven, unapportioned, of four hundred and eighty-four dollars and thirty-three cents. Since the last biennial report, the Board of Examiners have purchased, for the benefit of the School Fund, with money arising from sales of State school lands, one hundred and seventy-three thousand nine hundred dollars worth of county bonds, drawing interest, as follows:

NAME OF COUNTY.	Amount.	Rate of Interest.
Humboldt	\$25,000 00	9 per cent.
Lake	11,400 00	7 per cent.
Mendocino	10,000 00	8 per cent.
San Joaquin	5,000 00	10 per cent.
San Luis Obispo	40,000 00	8 per cent.
San Luis Obispo	10,000 00	10 per cent.
Santa Barbara	20,000 00	10 per cent.
Tehama	11,500 00	8 per cent.
Tulare	20,000 00	10 per cent.
Sacramento	16,000 00	6 per cent.
Santa Clara	5,000 00	7 per cent.
	\$173,900 00	

Leaving a balance in the School Land Fund of twelve thousand nine hundred and eleven dollars and sixty-one cents, subject to investment.

On the sixth day of August, eighteen hundred and seventy-seven,

the State Treasurer held in trust, for the benefit of the School Fund, the following bonds:

SERIES.	Amount.	Rate of Interest.
State Capitol Bonds of 1870	\$236,000 00	7 per cent.
State Capitol Bonds of 1872	115,000 00	7 per cent.
Bonds of 1873	1,386,500 00	6 per cent.
County bonds, above described	173,900 00	
	\$1,911,400 00	

These bonds produce an annual interest of one hundred and twenty-two thousand five hundred and thirty-eight dollars.

UNIVERSITY FUND.

The amount of bonds now held in trust by the State Treasurer for the University Fund is:

BONDS.	Rate.	Amount.
State Capitol Bonds of 1872	7 per cent.	\$135,000 00
State Bonds of 1873	6 per cent.	676,500 00
Total		\$811,500 00

These bonds yield an annual income of fifty thousand and forty dollars. The total amount drawn from the State treasury for support, aid, and endowment of the State University, and for the support of the State University Library, during the twenty-seventh fiscal year, was ninety-two thousand six hundred and ninety dollars and eighty-eight cents; of which, the sum of fifty thousand and forty dollars was derived from interest on bonds, and forty-two thousand six hundred and fifty dollars from other sources; while the total amount drawn for the twenty-eighth fiscal year was simply the interest on bonds, amounting to fifty thousand and forty dollars.

STATE DEBT.

The total funded debt of the State on June thirtieth, eighteen hundred and seventy-seven, was:

SERIES.	Rate.	Amount.
Civil Bonds of 1873	6 per cent.	\$2,801,000 00
State Capitol Bonds of 1870	7 per cent.	250,000 00
State Capitol Bonds of 1872	7 per cent.	250,000 00
Soldiers' Relief Bonds	7 per cent.	95,500 00
Civil Bonds of 1857	7 per cent.	13,000 00
Civil Bonds of 1860	7 per cent.	1,500 00
Total		\$3,411,000 00

As all the bonds of the issues of eighteen hundred and fifty-seven and eighteen hundred and sixty have been called in, and the interest ceased on the thirty-first day of July, eighteen hundred and seventy-five, the funded debt bearing interest at this date will only amount to three million three hundred and ninety-six thousand five hundred dollars (\$3,396,500 00). The annual interest on this sum will amount to two hundred and nine thousand seven hundred and forty-five dollars (\$209,745 00); but as the State has guaranteed interest to the amount of one hundred and five thousand dollars (\$105,000 00) per annum on Pacific Railroad bonds, the annual amount of interest to be raised will be three hundred and fourteen thousand seven hundred and forty-five dollars (\$314,745 00).

The following table shows the disposition of the funded debt of the State on June thirtieth, eighteen hundred and seventy-seven :

KIND OF DEBT.	Amount.
Bonds held in private hands.....	\$746,000 00
Bonds held in trust by State Treasurer for School Fund.....	1,737,500 00
Bonds held in trust by State Treasurer for University Fund.....	811,500 00
Bonds held in trust by Regents of State University.....	116,000 00
Total.....	\$3,411,000 00

Deduct from this ninety-one thousand nine hundred and thirty-eight and fifty-seven one-hundredths dollars (\$91,938 57), the amount in the Interest and Sinking Fund applicable to redemption of bonds, and we find the net bonded indebtedness of the State to be three million three hundred and nineteen thousand and sixty-one and forty-three one-hundredths dollars (\$3,319,061 43). In calculating the amount that is now in the Interest and Sinking Fund applicable to the redemption of bonds, I have deducted the amount that will be necessary to pay the interest due on bonds on January first, eighteen hundred and seventy-eight; this deduction is rendered necessary, because the interest will be due before any considerable amount can be received for that purpose from taxes. The total amount of money in the Interest and Sinking Fund on June thirtieth, eighteen hundred and seventy-seven, was two hundred and forty-nine thousand three hundred and eleven and seven one-hundredths dollars (\$249,311 07). The amount necessary to pay accruing interest on bonds, due January first, eighteen hundred and seventy-eight, is one hundred and fifty-seven thousand three hundred and seventy-two and fifty one-hundredths dollars (\$157,372 50). Deducting this amount from the amount in the fund, and we have ninety-one thousand nine hundred and thirty-eight and fifty-seven one-hundredths dollars (\$91,938 57) as the balance applicable for redemption of bonds.

The interest bearing debt of the State on June thirtieth, eighteen hundred and seventy-seven, was divided as follows:

KIND OF DEBT.	Amount.
Bonds held in private hands.....	\$731,500 00
Bonds held in trust by State Treasurer for School Fund.....	1,737,500 00
Bonds held in trust by State Treasurer for University Fund.....	811,500 00
Bonds held in trust by Regents State University.....	116,000 00
Total.....	\$3,396,500 00

The bonds held in private hands and bearing interest at this date consist of:

State Capitol Bonds of 1870—7 per cent.....	\$14,000 00
Soldiers' Relief Bonds—7 per cent.....	95,500 00
Bonds of 1873—6 per cent.....	622,000 00
Total.....	\$731,500 00

The interest on these bonds amounts to forty-four thousand nine hundred and eighty-five dollars (\$44,985 00) per annum.

STATE LOAN TO CALAVERAS COUNTY.

Under authority of Act of the Legislature, dated March thirtieth, eighteen hundred and seventy-two, the sum of sixty thousand two hundred and twelve dollars and fifty cents was loaned by the State to Calaveras County for the purpose of redeeming bonds of that county.

By the provisions of the Act the Board of Supervisors are required to levy an annual tax of not less than ten nor more than twenty-five cents on each one hundred dollars valuation of property for the purpose of repaying the State. Up to the close of the twenty-seventh fiscal year the tax was levied in accordance with the law, and the sum of five thousand eight hundred and fifty-two dollars and eighteen cents was collected and paid in to the State—of this sum seven dollars and three cents (\$7 03) was paid during the twenty-eighth fiscal year, from the tax levied in the twenty-seventh—leaving a balance of fifty-four thousand three hundred and sixty dollars and thirty-two cents (\$54,360 32) to be paid.

The Board of Supervisors failed to levy any tax for this purpose for the twenty-eighth fiscal year, which was in direct contravention of the law under which the loan was made to the county, as will be seen by reference to the statutes of eighteen hundred and seventy-one and two, page seven hundred and sixteen.

Amounts paid into the General Fund from sale of swamp lands in the several counties, from July 17th, 1855, to July 2d, 1858, the total amount being transferred therefrom by Act of Legislature dated April 1st, 1876, (Statutes 1875-6, folio 723,) to the Swamp Land Fund:

COUNTIES.	1855-6.	1856-7.	1857-8.	1858.	Total.
Alameda		\$339 70	\$425 52	\$5 53	\$770 75
Alpine					
Amador					
Butte		347 54			347 54
Calaveras					
Colusa		386 11	116 40		502 51
Contra Costa		832 31	184 89	109 13	1,126 33
Del Norte			232 80		232 80
El Dorado					
Fresno				636 32	636 32
Humboldt		1,176 05	67 47	283 34	1,526 86
Inyo					
Kern					
Klamath					
Lake					
Lassen					
Los Angeles					
Marin					
Mariposa					
Mendocino					
Merced		291 22	87 50	23 57	402 29
Modoc					
Mono					
Monterey					
Napa			341 43	42 05	383 48
Nevada					
Placer					
Plumas					
Sacramento		8,210 07	1,600 80	1,882 50	11,693 37
San Benito					
San Bernardino					
San Diego					
San Francisco		521 00	8 57		529 57
San Joaquin	\$2,267 17	5,944 83	1,628 67	4,406 60	14,247 27
San Luis Obispo					
San Mateo			114 51		114 51
Santa Barbara					
Santa Clara		687 90			687 90
Santa Cruz					
Shasta		69 84	69 84		139 68
Sierra					
Siskiyou			317 44		317 44
Solano	693 26	995 03	1,117 79	605 05	3,411 13
Sonoma				143 37	143 37
Stanislaus		896 70	189 31	32 80	1,118 81
Sutter		1,701 40	278 16	301 65	2,281 21
Tehama					
Trinity					
Tulare		159 08		2,817 85	2,976 93
Tuolumne					
Ventura					
Yolo		2,829 68	783 75	719 74	4,333 17
Yuba					
Totals	\$2,960 43	\$25,388 46	\$7,564 85	\$12,009 50	\$47,923 24

Amounts transferred from the Swamp Land Fund to the Swamp Land District Funds; also the amounts paid to the several counties from the same fund, as per Act of Legislature dated April 1st, 1876, (Statutes 1875-6, p. 723):

DISTRICTS.

Swamp Land District No. 1 Fund	\$8,127 89	
Swamp Land District No. 4 Fund	5,846 69	
Swamp Land District No. 5 Fund	13,784 18	
Swamp Land District No. 18 Fund	7,744 31	
Swamp Land District No. 59 Fund	463 09	
Total to Districts		\$35,966 16

COUNTIES.

Alameda, Treasurer of	\$770 75	
Butte, Treasurer of	347 54	
Colusa, Treasurer of	502 51	
Contra Costa, Treasurer of	1,126 33	
Del Norte, Treasurer of	232 80	
Fresno, Treasurer of	636 32	
Innuboldt, Treasurer of	1,526 86	
Merced, Treasurer of	402 29	
Napa, Treasurer of	383 48	
San Francisco, Treasurer of	529 57	
San Mateo, Treasurer of	114 50	
Santa Clara, Treasurer of	687 90	
Shasta, Treasurer of	139 68	
Siskiyou, Treasurer of	317 44	
Sonoma, Treasurer of	557 03	
Stanislaus, Treasurer of	705 15	
Tulare, Treasurer of	2,976 93	
Total to Counties		\$11,957 08
Amount transferred from General Fund to Swamp Land Fund		\$47,923 24

The total amount of Controller's Warrants outstanding against the General Swamp Land Fund, and the several Swamp Land District Funds, June 30th, 1877, was eighty-four thousand eight hundred and thirty-five dollars and fifty-two cents, apportioned as follows:

NUMBER AND LOCATION OF DISTRICT.	Amount.
Swamp Land Fund	\$1,683 36
District No. 1, Sacramento and Sutter	15,172 97
District No. 2, Sacramento	11,432 68
District No. 5, San Joaquin	6,747 29
District No. 6, Tulare	120 00
District No. 7, Solano	117 00
District No. 16, Tulare	36 00
District No. 17, San Joaquin	8 00
District No. 18, Yolo and Solano	48,021 37
District No. 41, Solano	657 50
District No. 45, Tulare	472 06
District No. 48, Tulare	4 20
District No. 59, San Joaquin	363 09
Total	\$84,835 52

In the case of *Juliet Charlton vs. J. G. Estudillo*, State Treasurer, the Supreme Court, at its July term, eighteen hundred and seventy-seven, decided that the petitioner, who held a warrant drawn on the Fund of Swamp Land District Number One, was entitled to interest thereon at the rate of ten per cent. per annum from the date thereof. If this

decision is held to apply to all warrants outstanding against the funds mentioned in the Act on which that decision appears to have been based, then all the warrants outstanding against Swamp Land Districts Numbers One, Two, Five, and Eighteen draw interest at the rate of ten per cent. per annum from the date of their issuance; and as they have now been outstanding, on an average, about ten years, it may be considered that the indebtedness of these districts is about double the amount represented in the above table; or, one hundred and sixty-two thousand seven hundred and forty-eight dollars and sixty-two cents, which, added to three thousand four hundred and sixty-one dollars and eleven cents, the outstanding indebtedness of the remaining districts, would show a total outstanding indebtedness of the Swamp Land Fund, and the several District Swamp Land Funds, June thirtieth, eighteen hundred and seventy-seven, of both interest and principal, of about one hundred and sixty-six thousand two hundred and nine dollars and seventy-three cents.

The following table shows the amount of money in the State treasury, June thirtieth, eighteen hundred and seventy-seven, applicable to the payment of the above indebtedness:

NAME OF FUND.	Amount.
Swamp Land Fund.....	\$1,683 36
Swamp Land District No. 1 Fund.....	2,613 21
Swamp Land District No. 2 Fund.....	1,097 27
Swamp Land District No. 5 Fund.....	559 98
Swamp Land District No. 17 Fund.....	8 00
Swamp Land District No. 18 Fund.....	534 72
Swamp Land District No. 41 Fund.....	44
Swamp Land District No. 45 Fund.....	9 85
Swamp Land District No. 59 Fund.....	390 38
Total.....	\$6,897 21

DELINQUENT PROPERTY TAX OF EIGHTEEN HUNDRED AND SEVENTY-FIVE AND SIX, AND EIGHTEEN HUNDRED AND SEVENTY-SIX AND SEVEN DUE THE STATE.

There was due the State from the several counties on the thirtieth day of June, eighteen hundred and seventy-seven, on account of property tax for assessment of eighteen hundred and seventy-five and six, and eighteen hundred and seventy-six and seven, the following sums:

YEAR.	Amount.
Assessment for 1875-6, the 27th fiscal year.....	\$406,441 67
Assessment for 1876-7, the 28th fiscal year.....	266,134 90
	\$672,576 57

The delinquency for the twenty-seventh fiscal year is ten and eighty-seven one-hundredths per cent., and for the twenty-eighth fiscal year six and eight one-hundredths per cent.

COST OF ASSESSING AND COLLECTING STATE TAX.

The commissions and mileage allowed for assessing, auditing, collecting, keeping, and paying in State taxes for the twenty-seventh and twenty-eighth fiscal years were as follows:

OFFICER.	27th Year.	28th Year.
Assessor	\$65,295 60	\$73,965 26
Auditor	30,944 18	34,840 24
Treasurer	54,121 94	69,147 21
Tax Collector	43,026 38	51,729 62
Assessor, as Tax Collector	900 91	527 96
Totals	\$194,289 01	\$230,210 29

The percentage paid for assessing, auditing, collecting, keeping, and paying in State taxes was a little more than five and eight-tenths per cent. of the gross amount of property tax collected for the twenty-seventh fiscal year, and a little more than five and five-tenths per cent. for the twenty-eighth fiscal year. This percentage, added to the above percentage of delinquency, shows that the entire percentage of delinquency and for assessing, auditing, collecting, keeping, and paying in State taxes for the twenty-seventh fiscal year was about sixteen per cent., and for the twenty-eighth fiscal year a little more than eleven per cent.

COLLECTION OF REVENUE.

For the reasons hereinafter given, compensation to county officers, for auditing, assessing, collecting, keeping, and disbursing State taxes, or other moneys, should, in my judgment, be abolished, save in the case of the County Treasurers, who should be allowed their mileage for bringing the State money to the State treasury:

First—Because, under the present system, there are eight different rates of compensation allowed to Tax Collectors for their services in collecting State taxes, giving some counties a much larger sum for the services of said Tax Collectors than is received by others.

Second—Because there are two counties that receive nothing for collecting State taxes.

Third—Because most of the county officers are salaried, and the money allowed to them by the State for the aforesaid auditing, collecting, etc., of State taxes, goes back into the treasuries of said counties to which said officers belong; and there is no reason or sense in collecting two hundred thousand dollars or more annually from the several counties, in the shape of State taxes, and then paying the same back to the said counties as compensation for auditing, assessing, collecting, keeping, and paying to the State its portion of the taxes.

Fourth—Because the present system of allowing for auditing, collecting, assessing, keeping, and disbursing State taxes, a certain percentage on the first ten thousand dollars, and a certain other percentage on the next ten thousand dollars, and so on, and excepting certain moneys and certain officers from the operation of the law, is

very complicated, leads to many mistakes in the county officers' books, increases the work in this office, and is of no practical benefit to anybody.

Therefore, I would recommend that, in those counties where the Auditors, Assessors, Collectors, and Treasurers receive fees instead of salaries, that their respective counties pay them for all services rendered the State in reference to State taxes, the amount they now receive from the State for such services, and in such case the State would pay nothing back to the several counties for the aforesaid services, nor would she collect so much from the said counties annually as she now does by the sum of two hundred thousand dollars and over, and every county would be treated alike in the premises (which is not now the case); settlements between Collectors and County Auditors would be much simplified, and it would be within the range of possibilities for the Controller to keep a correct property tax account with the several counties.

COMMISSIONS ALLOWED TAX COLLECTORS, AND APPORTIONMENT OF PROPERTY TAX BETWEEN STATE AND COUNTY.

It is the duty of the Controller to accompany his biennial report with tabular statements, showing the amount of revenue chargeable to each county for the two preceding fiscal years; also, the amount paid into the State treasury, and the amount remaining unpaid. I came into office in February, eighteen hundred and seventy-six, and the twenty-seventh fiscal year commenced July first, eighteen hundred and seventy-five, and, consequently, the greater portion of the property tax from the several counties was paid in, upon blanks sent out by the predecessor of General Mandeville, and under a system, which I discovered (upon taking office) was erroneous, but which could not be changed until the end of the said twenty-seventh fiscal year, to wit: July first, eighteen hundred and seventy-six. I found that former Controllers had allowed the County Auditors to settle with Tax Collectors and Assessors, and give those officers their commissions, and had not required said Auditors to report the amount of such commissions so allowed to this office; indeed, the blanks sent to County Auditors from this office, upon which County Treasurers were to settle, called for nothing, so far as property tax was concerned, but the net amount of property tax due the State, and it was impossible for the Controller to know whether the money had been correctly apportioned between the State and county, or whether the Tax Collectors and Assessors had taken more or less than their legal commissions. Therefore, as soon as practicable, I changed the form of said blanks (to be used by County Auditors) and instituted a system by which the Controller, in the future, at least, can have a chance to determine whether or not the State gets her just proportion of the property tax. In order to see whether or not the State had received her proportion of the property tax for the twenty-seventh fiscal year, to wit: from July first, eighteen hundred and seventy-five, to July first, eighteen hundred and seventy-six, (paid in under the old system—now discarded), I caused blanks to be printed and forwarded, in May, eighteen hundred and seventy-six, to the several County Auditors, together with a letter explanatory thereof, requesting them to make out and forward to this office a statement of the gross amount of property tax collected during

the twenty-seventh fiscal year, for both State and county purposes; the amount of such tax collected by the Assessor, as well as the amount collected by the Collector; the total rate of tax for county purposes, and the rate for county school purposes; also, the total commissions allowed both the Collector and Assessor, and such other information as required by me in the premises for the verification of their calculations. This blank being entirely different from any that had previously been furnished Auditors by this office, and no request having heretofore been made by any Controller for such information, so far as I could learn, as would enable him to determine for himself the exact amount of property tax collected in the several counties belonging to the State, it was not strange that some Auditors should, at first, conclude that I was asking of them the performance of a task not required by law; but after correspondence with those who held such opinions, and showing to their satisfaction that the information sought was absolutely necessary, that it was my bounden duty to know that the State received its full proportion of the property tax collected in each county, they, with but one exception, complied with my request. The examination of these reports, and the correspondence had in connection therewith, involved a great deal of labor and consumed much time, but the result more than compensated for both, not only in recovering money to the State, but in enabling Auditors to so apply the law that, in the future, a correct apportionment of the property tax will be made between the State and the several counties. The examination also disclosed the fact that, during the twenty-seventh fiscal year, the State had received thirteen thousand six hundred and eighty-two dollars and forty-eight cents less property tax than should have been paid into the State treasury. Of this amount, the sum of eight thousand two hundred and three dollars and thirty-two cents has since been paid, leaving a balance of five thousand four hundred and seventy-nine dollars and sixteen cents still due, the greater portion of which will no doubt be paid to the State in the course of settlements with County Treasurers; and the facts warrant the assertion that the mode of settlement now practiced will (as long as allowances are made to county officers for collecting, auditing, assessing, and disbursing State taxes), save annually to the State at least thirteen thousand dollars. In some counties the manner of calculating the Tax Collector's commissions had been erroneous and illegal for so many years that it was almost impossible to convince either Auditor or Collector that a greater amount than the law allowed had been charged the State for collecting its portion of the property tax. In a large proportion of the counties the Tax Collector is allowed for the collection of property tax for State and county purposes, (exclusive of school money), six per cent. on the first ten thousand dollars collected, four per cent on all over ten thousand and under twenty thousand dollars, and two per cent. on all over twenty thousand dollars. This law appears plain, and it seems that it would be almost impossible for an Auditor, in his settlements with a Tax Collector, to err in allowing him the commissions to which he is by law entitled. Yet I find that there were almost as many different constructions placed upon the law, and as various methods of calculating Collectors' commissions, as there were Auditors. While the law expressly exempts school money from the payment of commissions to the Tax Collectors, yet some Auditors would exempt nothing, and

allow the Tax Collector commissions on the gross amount collected; others would exempt the State school money and allow commissions on the county school money, while others would exempt the county school money and allow commissions on the State school money, thus allowing the Collector, in addition to his lawful commissions, just what the commissions on the school money amounted to. Other Auditors would allow six per cent. on the first ten thousand dollars collected, and four per cent. on the next twenty thousand dollars, instead of four per cent. on the next ten thousand dollars; while some would allow six per cent. on the first ten thousand dollars of State money, and six per cent. on the first ten thousand dollars of county money; while others would treat the collection of delinquent taxes as a new account, and allow commissions as if no collection had been made. Another error into which most of the Auditors had fallen, was in the division of the amount allowed the Tax Collector between the State and county. I find that it was generally the practice, and had been for years, to divide the commissions allowed the Tax Collector between the State and county, in the same manner as property tax was divided, which practice, in every instance, resulted in a loss to the State, and a corresponding gain to the county. If commissions were allowed for collecting school money, the same as other money derived from a tax on property, then the practice referred to would be correct, for, in that case, the State should pay the same proportion of the Tax Collector's commissions that the State tax bears to the whole tax levied for State and county purposes; but money collected for both State and county school purposes being exempt from the payment of Collectors' commissions, destroys this proportion entirely. The true rule is, the State should pay the same proportion of the Tax Collector's commissions that the State tax, minus the tax for State school purposes, bears to the whole State and county tax, minus the tax for both State and county school purposes. In further explanation of this matter, and in order to see how the former method would affect the State, let us take a county in which the Tax Collector's commissions amount to three thousand dollars, the State tax being sixty and five-tenths cents, and the county tax ninety and five-tenths cents, the total tax one dollar and fifty-one cents; tax for State school purposes twenty-two and three-tenths cents, and for county school purposes twelve cents. Under the old and erroneous practice, to which I have referred, the State would be called upon to pay $\frac{6.05}{151.5}$ of three thousand dollars, or twelve hundred and one dollars and ninety-nine cents. The correct view of the case is, that as the tax for neither State nor county school purposes produced any of the money for the collection of which the Tax Collector is entitled to commissions, so neither the tax for State and county school purposes should have anything to do with the division of the Tax Collector's commissions between the State and county; therefore, in order to correctly apportion the three thousand dollars Tax Collectors' commissions, before mentioned, between the State and county, it is necessary to deduct twenty-two and three-tenths cents (the tax for State school purposes) from sixty and five-tenths cents (the total State tax), and we find the remaining State tax to be thirty-eight and two-tenths cents; also deduct twelve cents (the tax for county school purposes) from the county tax, and we find the remaining county tax to be seventy-eight and five-tenths cents, which added to the State tax of

thirty-eight and two-tenths cents, shows that the whole tax which produced the amount for the collection of which the Tax Collector is entitled to commissions, is one dollar and sixteen and seven-tenths cents, of which thirty-eight and two-tenths cents was for State purposes, and seventy-eight and five-tenths cents for county purposes, therefore the State should pay three hundred and eighty-two eleven hundred and sixty-sevenths of three thousand dollars, or nine hundred and eighty-two dollars, just two hundred and nineteen dollars and ninety-two cents less than it paid under the former erroneous method.

So far as I have been able to discover from the books, reports, and other papers in this office, no Controller has ever known the amount that the State has actually paid for the collection of its portion of the property tax; and if I am correct in this, then no Controller has ever known whether the State's portion of the property tax collected has been paid into the State treasury. This portion of the Controller's duty has been left entirely to County Auditors, and there is no doubt but that the State has paid a large amount for the collection of property tax in excess of the sum allowed by law. In support of what I have said, a glance at the blank on which Auditors have heretofore made their reports to this office will show that it imparted no information to the Controller to enable him to prove whether the net amount reported to the State was correct or otherwise; it simply reported the net amount due the State, so if the Auditor erred in his application of the law, or in any other manner, there was no means by which the Controller or other person could detect it; but in the blank now in use, the Auditor is required to report, not only the net amount due the State, but the gross collection of property tax for both State and county purposes, collected by both Collector and Assessor (each stated separately), the commissions allowed the Collector and Assessor (each stated separately), the rate of tax for county purposes, and for county school purposes. With these facts the Controller can, at each settlement with the County Treasurer, determine whether the correct amount is paid the State, but without them he cannot determine whether the report is correct or otherwise.

RATE OF TAXATION.

Rate of taxation for the twenty-seventh fiscal year (eighteen hundred and seventy-five and six) was sixty and five-tenths cents ($60\frac{5}{10}$), and for the twenty-eighth fiscal year, (eighteen hundred and seventy-six and seven) was seventy-three and five-tenths cents ($73\frac{5}{10}$) on each one hundred dollars valuation of property, and was apportioned as follows:

	27th Fiscal Year.	28th Fiscal Year.
General Fund	31.6	43.9
School Fund	22.3	23.4
Interest and Sinking Fund	6.6	6.2
	60.5	73.5

The large tax for the General Fund for the twenty-eighth fiscal year, to wit: forty-three and nine-tenths cents, was rendered necessary by reason of the appropriation, by the Legislature of eighteen hundred and seventy-five and six, of the sum of one million two hundred and sixty-nine thousand nine hundred and eighty-five dollars and seventy cents, (\$1,269,985 70), (the greater portion of which was provided for by said tax levy of forty-three and nine-tenths cents,) to pay outstanding claims against the State; to pay deficiencies for the twenty-fifth, twenty-sixth, and twenty-seventh fiscal years; to pay debts against and to finish the Napa Insane Asylum, and to replace buildings destroyed by fire at San Quentin, and the Deaf, Dumb, and the Blind Asylum, as follows, to wit:

DEFICIENCIES,

Twenty-fifth, Twenty-sixth, and Twenty-Seventh fiscal years, and other claims against the State, provided for by the Legislature of 1875-6, twenty-first session.

APPROPRIATIONS.

Contingent expenses of State Printing Office.....	\$1,000 00
Support of State Printing Office.....	40,000 00
Postage and expressage of Secretary of State's Office.....	1,100 00
Stationery, fuel, light, etc.	6,370 00
Support of State Prison.....	66,000 00
Transportation of prisoners.....	6,000 00
Transportation of insane	35,000 00
Printing, paper, and official advertisements.....	42,000 00
Construction of State Capitol.....	5,000 00
Pay of employes of State Capitol grounds.....	3,600 00
Armory rent, etc., National Guard, 25th fiscal year.....	17,905 00
Armory rent, etc., National Guard, 26th and 27th fiscal years	59,928 00
Payment of indebtedness of State Agricultural Society.....	16,141 89
Pay claims for completion of Napa Insane Asylum.....	494,000 00
Support of Napa Insane Asylum.....	48,000 00
Salary of State Board of Examiners.....	1,984 14
Salary of <i>ex officio</i> member of State Board of Equalization.....	680 00
Salary of members and Clerk of State Board of Equalization.....	3,600 00
State Normal School	5,000 00
Salaries of State Board of Education.....	200 00
Claim of A. L. Bancroft & Co.	2,700 00
Claim of John Breuner.....	650 00
Claim of E. O. F. Hastings.....	1,344 98
Claim of George Whitlock.....	450 00
Claims of John Lord Love, J. J. Green, and Drury Melone.....	5,400 00
Translating laws of 20th session of Legislature into Spanish.....	2,463 04

\$866,517 05

EXTRAORDINARY APPROPRIATIONS.

Indebtedness caused by fire, Deaf, Dumb, and the Blind Asylum	\$27,000 00
Construction of new buildings, Deaf, Dumb, and the Blind Asylum.....	110,000 00
Erection of new work-shops, etc., at State Prison (the old ones having been destroyed by fire).....	200,000 00
Transfer, by Act of Legislature, from General Fund to Swamp Land Fund, on account of moneys belonging to Swamp Land Fund placed in General Fund prior to 1858	47,923 24
Furniture and repairs of State Normal School.....	8,000 00
Redemption of unused and uncanceled California State stamps.....	10,545 41

Total \$1,269,985 70

ESTIMATE OF EXPENDITURES.

Subdivision two of section four hundred and thirty-three, Political Code, requires that a detailed estimate of expenditures, for the support of the government of the State, for the thirtieth and thirty-first

fiscal years, shall accompany this report; that each object of expenditure shall be specified, distinguishing between such as are provided for by permanent or temporary appropriations, and such as must be provided for by new statute; and the means suggested by which such expenditures are to be defrayed. Statement Number Twenty-five, in Appendix, is referred to for the particular objects for which appropriations are needed. The temporary appropriations recommended are for pay of porters, postage and expressage, contingent expenses, etc., in State offices; for support of State Printing Office, State Prison, Insane Asylums, Deaf, Dumb and the Blind Institute, State Normal School; and for nearly all the appropriations under the head of miscellaneous.

The appropriation recommended for interest on bonds, includes the sum of one hundred and five thousand (\$105,000 00) dollars per annum, guaranteed by the State on Central Pacific Railroad bonds. The amount for support of schools is based on section four hundred and forty-three, Political Code, (and it will continue to increase as the annual school census shows an increase in the school children of the State). The balance of the estimate is based on the amounts fixed by statute.

The means necessary to defray these expenses will have to be derived from taxation of property.

The total amount of the estimate for the two fiscal years is five million seven hundred and fifteen thousand seven hundred and eighty-four and fifteen one-hundredths (\$5,715,784 15) dollars; of which amount the sum of two million seven hundred and fifty-seven thousand nine hundred and thirty-nine and fifteen one-hundredths (\$2,757,939 15) dollars will be required for the thirtieth fiscal year; and two million nine hundred and fifty-seven thousand eight hundred and forty-five (\$2,957,845 00) dollars for the thirty-first fiscal year.

RETRENCHMENT.

As the cost of keeping the insane (in two asylums) will be constantly increasing in spite of all efforts to the contrary, and as the appropriation for the State Prison must be materially enlarged from year to year, unless some more profitable employment can be found for the prisoners, and, as under the present law, the tax levy for State school purposes must grow with the increasing number of children, as shown by the school census, for each succeeding year, it behooves the officers of the State Government to practice the most rigid economy in their several departments, in order to keep down the State tax rate to a reasonable figure; and I most earnestly recommend that the incoming Legislature make no appropriations except such as are absolutely necessary, and to reduce every such appropriation to the lowest possible limit.

All of which is respectfully submitted.

W. B. C. BROWN,
State Controller.

STATEMENT

Showing in detail the manner in which the appropriation for postage and expressage in the office of Controller of State for the 27th and 28th fiscal years was expended from December 6th, 1875, to June 30th, 1877, inclusive:

TWENTY-SEVENTH FISCAL YEAR.

Feb. 1, 1876, W. C. Hopping, box rent	\$4 00
Feb. 1, 1876, W. C. Hopping, postage on books	1 92
Feb. 1, 1876, W. C. Hopping, postage stamps	48 44
Feb. 26, 1876, Western Union Telegraph Company, telegraphing	23 90
April 10, 1876, Wells, Fargo & Co., expressage	6 55
June 5, 1876, W. C. Hopping, box rent	4 00
June 5, 1876, W. C. Hopping, postage stamps	10 00
June 10, 1876, Wells, Fargo & Co., expressage	1 25
Sept. 18, 1876, W. C. Hopping, box rent	1 33
Sept. 18, 1876, W. C. Hopping, postage stamps (bought in June)	10 00

TWENTY-EIGHTH FISCAL YEAR.

Sept. 18, 1876, W. C. Hopping, box rent	2 67
Sept. 18, 1876, W. C. Hopping, postage stamps	10 00
Nov. 20, 1876, Wells, Fargo & Co.'s Express	65
Nov. 20, 1876, W. C. Hopping, postage stamps	10 00
Jan. 2, 1877, W. C. Hopping, postage stamps	10 00
Jan. 2, 1877, W. C. Hopping, box rent	8 00
Feb. 5, 1877, W. C. Hopping, postage stamps	10 00
Feb. 19, 1877, W. C. Hopping, postage stamps	50 00
April 4, 1877, Western Union Telegraph Company, telegraphing	3 75
April 4, 1877, W. C. Hopping, box rent	4 00
April 4, 1877, Wells, Fargo & Co.'s Express, expressage	2 90
June 20, 1877, W. C. Hopping, postage stamps	5 00

\$228 36

STATE OF CALIFORNIA, }
 County of Sacramento. } ss.

I, W. B. C. BROWN, Controller of State, do solemnly swear that the above and foregoing contains a true and correct statement in detail of the manner in which the appropriation for postage and expressage in the office of Controller of State, for the twenty-seventh and twenty-eighth fiscal years, was expended, from December sixth, eighteen hundred and seventy-five, to June thirtieth, eighteen hundred and seventy-seven, inclusive, as per vouchers now on file in this office.

W. B. C. BROWN.

Subscribed and sworn to before me, this twenty-sixth day of September, eighteen hundred and seventy-seven.

[SEAL.]

D. B. WOOLF, Clerk.

By JOHN P. POOLE, Deputy Clerk Supreme Court.

STATEMENT

Showing the manner in which the appropriation for postage and expressage in the office of Controller of State for the 27th and 28th fiscal years was expended by Controller J. J. Green, from the 1st day of July to the 6th day of December, 1875:

Sept. 6, 1875, Wells, Fargo & Co., 500 franks	\$25 00
Sept. 6, 1875, Wells, Fargo & Co., expressage	1 50
Oct. 18, 1875, W. C. Hopping, box rent	8 00
Oct. 18, 1875, W. C. Hopping, 3 keys	75
Oct. 18, 1875, Wells, Fargo & Co., expressage	6 50
Dec. 2, 1875, W. C. Hopping, box rent	4 00
Dec. 2, 1875, Wells, Fargo & Co., expressage	48 05
Amount expended by Controller J. J. Green during six months	\$93 80
Amount expended by Controllers J. W. Mandeville and W. B. C. Brown during eighteen months	228 36
Total amount expended for postage and expressage, 27th and 28th fiscal years	\$322 16

STATEMENT

Showing in detail the manner in which the appropriation for contingent expenses in the office of Controller of State for the 27th and 28th fiscal years was expended, from December 6th, 1875, to June 30th, 1877, inclusive:

TWENTY-SEVENTH FISCAL YEAR.

Jan. 1, 1876, George Lytle, subscription to Examiner	\$1 10
Feb. 26, 1876, C. E. Spencer, subscription to Record-Union	3 13
March 1, 1876, Wm. A. Mott, subscription to San Francisco Chronicle	1 65
March 3, 1876, White & Nicholl, towels	2 00
March 3, 1876, J. H. Davis, corkscrew and oil stone	1 00
March 11, 1876, W. Halley, Legislative Directory	1 00
May 1, 1876, Crocker & Co., Sacramento Directory	3 00
May 1, 1876, C. H. Gilman, soap, comb, and brush	1 65
June 30, 1876, C. E. Spencer, subscription to Record-Union	3 12
June 30, 1876, Pacific Ice Company, ice from January 1st to June 30th, 1876	11 15

TWENTY-EIGHTH FISCAL YEAR.

Oct. 16, 1876, Pacific Ice Company, ice for July, August, and September	11 85
Nov. 1, 1876, Pacific Ice Company, ice	4 95
Nov. 1, 1876, C. E. Spencer, subscription to Record-Union	4 50
Nov. 20, 1876, G. I. Lytle, subscription to Examiner	3 30
Jan. 2, 1877, washing towels	1 50
Jan. 2, 1877, soap	1 00
Jan. 24, 1877, G. I. Lytle, subscription to Examiner	3 30
Jan. 24, 1877, C. E. Spencer, subscription to Record-Union	3 25
April 4, 1877, G. I. Lytle, subscription to Examiner	3 30
June 2, 1877, subscription to Mountain Democrat	3 00
June 2, 1877, E. F. Haswell, subscription to Wasp	4 70
June 2, 1877, subscription to Watsonville Transcript	1 75
	\$75 20

STATE OF CALIFORNIA, }
County of Sacramento. } ss.

I, W. B. C. BROWN, Controller of State, do solemnly swear that the above and foregoing contains a true and correct statement in detail of the manner in which the appropriation for contingent expenses in the office of Controller of State, for the twenty-seventh and twenty-eighth fiscal years, was expended, from the sixth day of December,

eighteen hundred and seventy-five, to the thirtieth day of June, eighteen hundred and seventy-seven, inclusive, as per vouchers now on file in this office.

W. B. C. BROWN.

Subscribed and sworn to before me, this twenty-sixth day of September, eighteen hundred and seventy-seven.

[SEAL.]

D. B. WOOLF, Clerk.

By JOHN P. POOLE, Deputy Clerk Supreme Court.

STATEMENT

Showing the manner in which the appropriation for contingent expenses in the office of Controller of State for the 27th and 28th fiscal years was expended by Controller of State J. J. Green, from the 1st day of July to the 6th day of December, 1875, as per vouchers now on file in this office:

Sept. 6, 1875, Pacific Ice Company, ice for August and September-----	\$6 63
Nov. 15, 1875, Pacific Ice Company, ice for October-----	3 25
Nov. 15, 1875, cash paid for newspapers and sundry articles in Controller's office by J. J. Green-----	93 37
Dec. 4, 1875, Pacific Ice Company, ice for November-----	3 25
Amount expended by Controller J. J. Green during six months-----	\$106 50
Amount expended by Controller W. B. C. Brown during eighteen months-----	75 20
Total contingent expenses, 27th and 28th fiscal years-----	\$181 70

STATEMENT

Showing the manner in which the appropriation for prosecution of delinquents for infractions of the revenue laws for the 27th and 28th fiscal years was expended by Controller of State J. J. Green, from July 1st to December 5th, 1875, inclusive:

July 1, 1875, Creed Haymond, for fee in case of <i>Houghton vs. Austin</i> , and advice to the Controller in regard to revenue matters for the 26th fiscal year (paid in 27th fiscal year)-----	\$1,000 00
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STATEMENT

Showing the manner in which the appropriation for printing and engraving Controller's warrants for the 27th and 28th fiscal years was expended by Controller of State J. J. Green, from July 1st to December 5th, 1875, inclusive:

Sept. 6, 1875, C. Bernhart, one box for engraved stone-----	\$1 25
Nov. 15, 1875, C. W. Gordon, lithographing and printing indorsement on 18,000 Controller's warrants-----	366 30
	\$367 55

APPENDIX.

STATEMENT No. 1.

RECEIPTS FOR THE TWENTY-SEVENTH FISCAL YEAR.

Statement showing the receipts into the State treasury for fiscal year commencing July 1st, 1875, and ending June 30th, 1876.

COUNTIES.	Property Tax of 1868-9--	Property Tax of 1870-1--	Property Tax of 1871-2--	Property Tax of 1872-3--	Property Tax of 1873-4--	Property Tax of 1874-5--	Property Tax of 1875-6--	Property Tax of 1876-7--	Total Property Tax-----
Alameda-----		\$687 73				\$1,037 77	\$206,290 23		\$208,215 73
Alpine-----							2,325 61		2,325 61
Anador-----							13,118 08		13,118 08
Butte-----							56,035 39		56,035 39
Calaveras-----							8,854 19		8,854 19
Colusa-----							55,867 76		55,867 76
Contra Costa-----							40,391 36	\$615 71	41,007 07
Del Norte-----							3,593 12		3,593 12
El Dorado-----							13,383 39		13,383 39
Fresno-----							39,508 26		39,508 26
Humboldt-----						1,920 82	27,076 07		28,996 89
Inyo-----							7,193 63		7,193 63
Kern-----							18,795 40		18,795 40
Lake-----							11,169 92		11,169 92
Lassen-----						594 86	5,935 49		6,530 35
Los Angeles-----							72,252 92		72,252 92
Marin-----							42,521 32		42,521 32
Mariposa-----							7,170 62		7,170 62
Mendocino-----							32,180 79		32,180 79
Merced-----						943 60	35,671 28		36,614 88
Modoc-----							4,178 70		4,178 70

Mono						2,938 61			2,938 61
Monterey						50,956 50			50,956 50
Napa						43,921 25			43,921 25
Nevada						43,439 09			43,439 09
Placer					\$6,249 32	37,476 81			49,148 61
Plumas					\$6,422 48	8,464 44			8,464 44
Sacramento						108,820 54			108,820 54
San Benito						25,468 60			25,468 60
San Bernardino						10,392 79			10,392 79
San Diego			376 44			16,623 69			17,000 13
San Francisco				\$212 98	1,193 47	1,221,289 15			1,255,136 91
San Joaquin	\$333 36					110,071 26			110,071 26
San Luis Obispo						28,376 71			29,372 46
San Mateo						34,375 01			35,238 44
Santa Barbara					863 43	34,416 35			34,416 35
Santa Clara						166,418 36			167,116 75
Santa Cruz						39,844 87	698 39		39,844 87
Shasta						10,359 92			10,359 92
Sierra						11,874 54			11,874 54
Siskiyou						17,433 41			17,433 41
Solano						53,431 33			53,431 33
Sonoma					1,047 35	88,730 40			89,777 75
Stanislaus						39,915 20			39,915 20
Sutter						24,359 55			24,359 55
Tehama						20,219 78			20,219 78
Trinity						4,591 69			4,591 69
Tulare						27,493 69			27,493 69
Tuolumne						7,097 91			7,097 91
Ventura						15,805 62			15,805 62
Yolo						50,779 56			50,779 56
Yuba						26,875 44			26,875 44
Totals	\$333 36	\$1,264 17	\$212 98	\$8,481 38	\$10,686 73	\$33,208 69	\$3,085,775 60	\$1,314 10	\$3,141,277 01

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RECEIPTS FOR THE TWENTY-SEVENTH FISCAL YEAR—Continued.

COUNTIES.	State School Lands, 500,- 000-acre Grant—Prin- cipal -----	State School Lands, 500,- 000-acre Grant—Inter- est -----	State School Lands, 16th and 36th Sections— Principal -----	State School Lands, 16th and 36th Sections—Inter- est -----	Seminary Lands—Prin- cipal -----	Seminary Lands—Inter- est -----
Alameda -----				\$142 56		
Alpine -----			\$510 10	389 25		
Amador -----			1,861 54	1,097 20		
Butte -----			674 33	581 51		
Calaveras -----			3,661 13	1,156 67		
Colusa -----		\$31 68	1,901 81	358 06		
Contra Costa -----	\$792 00	33 00				
Del Norte -----	158 40					
El Dorado -----			2,732 60	1,854 66		
Fresno -----			6,129 41	4,833 10		
Humboldt -----	1,770 32	2,394 45	3,706 53	2,318 02		
Inyo -----			594 00	133 00		
Kern -----			3,306 60	1,966 83		
Lake -----			832 48	683 74		
Lassen -----			850 32	498 20		
Los Angeles -----			4,303 68	2,095 55		
Marin -----			1,415 75	506 88		
Mariposa -----			4,589 58	4,504 09		
Merced -----		31 36	1,706 35	1,213 89		
Modoc -----			366 30	243 83		
Mono -----			9 90	320 72		
Monterey -----			1,947 98	1,688 24		
Napa -----			3,889 65	1,089 13		
Nevada -----			1,068 75	434 18		
Placer -----		553 44	1,752 30	1,181 12		

Plumas	1,459 51	658 40	1,712 70	883 11	
Sacramento			1,019 20	283 91	
San Benito			752 40	209 19	
San Bernardino			3,408 16	1,666 00	
San Diego			1,444 72	564 49	
San Francisco					
San Joaquin	1,772 65	1,693 77	426 75	779 02	
San Luis Obispo	156 80	6 58	5,510 39	3,297 02	
San Mateo			8,985 39	1,335 62	
Santa Barbara			2,258 61	1,456 27	
Santa Clara	257 40	163 25	471 64	364 89	
Santa Cruz			609 91	818 05	
Shasta			59 40	535 06	
Sierra			237 60	35 61	
Siskiyou	954 17	595 64	26 58	449 54	
Solano	316 80	89 77	2,764 08	1,102 72	
Sonoma			2,928 80	1,666 86	
Stanislaus			312 53	1,867 33	
Sutter		79 00	565 04	176 27	
Tehama		47 52	966 50	1,213 52	\$39 60
Trinity				63 36	
Tulare			8,349 60	2,751 91	
Tuolumne	196 00	8 01	539 00	398 35	
Ventura			433 36	200 95	
Yolo			1,449 74	1,143 38	
Yuba			294 00	377 18	
Totals	\$7,834 05	\$6,385 87	\$93,387 21	\$52,930 04	\$39 60

RECEIPTS FOR THE TWENTY-SEVENTH FISCAL YEAR—Continued.

COUNTIES.	Tax on Possessory Claims	Estates of Deceased Persons	State Loan Tax	Swamp and Overflowed Lands—District No. 5	Swamp and Overflowed Lands—District No. 18	Reclamation Tax—Levee District No. 5
Calaveras			\$1,548 92			
Colusa	\$21 83	\$457 06				
Merced		20 95				
Napa	7 27					
Nevada		124 94		\$310 56		
San Joaquin		9 94				
San Luis Obispo	7 28				\$5,371 58	\$1,177 94
Sierra	7 27					
Solano						
Sutler		3 78			485 08	
Ventura						
Yolo						
Totals	\$43 65	\$616 67	\$1,548 92	\$310 56	\$5,856 66	\$1,177 94

RECEIPTS FOR THE TWENTY-SEVENTH FISCAL YEAR—Continued.

MISCELLANEOUS SOURCES.	Amounts.
Cancellation of coupons	\$735 00
Commutation tax, from Commissioner of Immigration	405 60
Fees from office of Secretary of State	11,773 05
Fees from office of Clerk of Supreme Court	7,071 00
Fees from office of Surveyor-General	6,129 57
Fees from office of Register State Land Office	708 50
Fees from office of Insurance Commissioner	8,495 01
*Interest on bonds held in trust by State Treasurer	155,925 00
Money refunded by James A. Waymire	750 00
Money refunded by State Board of Equalization	1,549 20
Money returned by F. Baehr—excess in coupon accounts	245 00
Money returned by J. M. Montgomery, attorney's fees in contested election case of Ward vs. Montgomery	500 00
Percentage on ballot paper	621 98
Rent of wharves and docks in San Francisco	253,322 63
Sale of ballot paper	6,219 97
Sale of Codes	697 50
Sale of Geological Survey Reports	335 70
Sale of old material, State Capitol	214 75
Sale of old material, State Armory	51 36
Sale of tide lands	40,344 59
	\$496,095 41
*Deduct amount for "interest on bonds held in trust by State Treasurer," as this is also included in receipts from property tax	155,925 00
Total from miscellaneous sources	\$340,170 41

RECAPITULATION

OF RECEIPTS FOR THE TWENTY-SEVENTH FISCAL YEAR.

SOURCES.	Amounts.
Alameda County.....	\$208,358 29
Alpine County.....	2,325 61
Amador County.....	14,017 43
Butte County.....	58,994 13
Calaveras County.....	11,658 95
Colusa County.....	60,707 41
Contra Costa County.....	44,090 62
Del Norte County.....	3,784 52
El Dorado County.....	18,020 65
Fresno County.....	50,470 77
Humboldt County.....	39,186 21
Inyo County.....	7,920 63
Kern County.....	24,068 83
Lake County.....	12,686 14
Lassen County.....	7,878 87
Los Angeles.....	78,652 15
Marin County.....	42,521 32
Mariposa County.....	9,093 25
Mendocino County.....	41,274 46
Merced County.....	40,023 54
Modoc County.....	4,788 83
Mono County.....	3,269 23
Monterey County.....	54,592 72
Napa County.....	48,920 98
Nevada County.....	44,949 29
Placer County.....	52,635 47
Plumas County.....	11,060 25
Sacramento County.....	112,241 56
San Benito County.....	26,430 19
San Bernardino County.....	15,466 95
San Diego County.....	19,009 34
San Francisco County.....	1,255,136 91
San Joaquin County.....	115,178 95
San Luis Obispo County.....	38,360 47
San Mateo County.....	45,559 45
Santa Barbara County.....	38,131 23
Santa Clara County.....	168,373 93
Santa Cruz County.....	41,272 83
Shasta County.....	10,954 38
Sierra County.....	12,155 02
Siskiyou County.....	19,459 34
Solano County.....	63,076 28
Sonoma County.....	94,373 41
Stanislaus County.....	42,174 06
Sutter County.....	26,326 32
Tehama County.....	22,756 20
Trinity County.....	4,655 05
Tulare County.....	38,595 20
Tuolumne County.....	8,239 27
Ventura County.....	16,443 71
Yolo County.....	53,857 76
Yuba County.....	27,546 62
From counties.....	\$3,311,724 98
From miscellaneous sources.....	340,170 41
Total receipts.....	\$3,651,895 39

Receipts for the Twenty-eighth Fiscal Year.

STATEMENT No. 2.

RECEIPTS FOR THE TWENTY-EIGHTH FISCAL YEAR.

Statement showing the receipts into the State treasury for fiscal year commencing July 1st, 1876, and ending June 30th, 1877.

COUNTIES.	Property Tax of 1872-3--	Property Tax of 1873-4--	Property Tax of 1874-5--	Property Tax of 1875-6--	Property Tax of 1876-7--	Property Tax of 1877-8--	Total Property Tax-----
Alameda				\$1,246 16	\$250,382 05		\$251,628 21
Alpine					1,930 78		1,930 78
Amador					16,794 31		16,794 31
Butte					69,000 61		69,000 61
Calaveras				138 36	11,962 73		12,101 09
Colusa				985 12	67,508 54		68,493 66
Contra Costa		\$654 38		382 84	47,713 97	\$444 16	49,195 35
Del Norte					4,059 76		4,059 76
El Dorado					15,116 51		15,116 51
Fresno				1,234 41	50,612 61		51,847 02
Humboldt					31,100 48		31,100 48
Inyo					11,518 89		11,518 89
Kern					38,990 41		43,808 64
Lake				4,818 23	13,822 51		13,822 51
Lassen					5,569 84		5,569 84
Los Angeles					101,419 41		101,419 41
Marin					48,077 45		48,077 45
Mariposa					9,549 75		9,549 75
Mendocino					38,989 51		38,989 51
Merced					39,951 76		39,951 76
Modoc				1,324 93	6,466 58		7,791 51

Mono					3,221 07				3,221 07
Monterey					48,222 45				48,222 45
Napa					55,689 37				55,689 37
Nevada					48,133 64				49,983 30
Placer					38,659 66				39,298 80
Plumas					12,724 85				13,258 28
Sacramento					122,756 94				126,101 89
San Benito					29,160 32				29,160 32
San Bernardino					16,983 62				16,983 62
San Diego					20,552 52				20,552 52
San Francisco					1,654,432 41				1,697,070 03
San Joaquin					122,369 41				129,452 25
San Luis Obispo					32,100 97				32,100 97
San Mateo					43,604 65				43,604 65
Santa Barbara					40,092 34				40,092 34
Santa Clara					196,098 04				196,781 99
Santa Cruz					41,906 86				41,906 86
Shasta					12,415 80				12,415 80
Sierra					11,712 86				11,712 86
Siskiyou					17,116 95				17,116 95
Solano					64,043 05				64,043 05
Sonoma					104,334 54				105,167 86
Stanislaus					40,524 09				40,524 09
Sutter					27,376 33				27,376 33
Tehama					24,301 59				24,301 59
Trinity					5,306 78				5,306 78
Tulare					30,583 98				30,583 98
Tuolumne					11,183 27				11,183 27
Ventura					22,834 98				22,834 98
Yolo					69,927 91				69,927 91
Yuba					30,288 95				30,288 95
Totals		\$6,709 07	\$5,358 17	\$2,784 63	\$53,333 52		\$1,128 11		\$8,948,032 16

RECEIPTS FOR THE TWENTY-EIGHTH FISCAL YEAR—Continued.

COUNTIES.

	State School Lands, 500,- 000-acre Grant—Prin- cipal	State School Lands, 500,- 000-acre Grant—Inter- est	State School Lands, 16th and 36th Sections— Principal	State School Lands, 16th and 36th Sections—Inter- est	Seminary Lands—Prin- cipal	Seminary Lands—Inter- est
Alameda			\$633 60	\$353 76		
Alpine			890 75	115 82		
Amador			326 05	437 02		
Butte		\$31 68	1,020 03	1,068 15		
Calaveras			934 84	1,055 40		
Colusa			4,561 03	2,845 82		
Contra Costa			817 54	360 28		
Del Norte	\$313 60	160 72	39 20	839 18		
El Dorado			1,045 50	1,449 20		
Fresno		145 04	1,803 20	3,733 61		
Humboldt	487 53	416 14	3,297 89	3,008 39		
Inyo				126 72		
Kern			12,337 18	6,350 07		
Lake			795 96	1,462 35		
Lassen	564 30	156 12	29 70	541 45		
Los Angeles			3,561 53	4,188 51		
Marin						
Mariposa			59 40	1,275 81		
Mendocino			9,471 38	12,273 70		
Merced		116 88	3,604 80	4,940 62		
Modoc			123 49	502 38		
Mono	1,613 40	454 68	1,360 76	335 54		
Monterey			1,686 98	1,290 31		
Napa			2,219 37	2,400 78		
Nevada			752 40	1,333 38		
Placer	316 80	452 57	544 50	760 33		

Plumas			101 10	1,759 50	
Sacramento	1,646 40	860 28	254 80	341 70	
San Benito			485 10	282 55	
San Bernardino			2,343 58	2,505 82	
San Diego			742 86	699 14	
San Francisco					
San Joaquin	4,482 39	4,900 66	940 80	945 96	
San Luis Obispo			3,478 24	3,704 91	
San Mateo			3,082 73	3,246 96	
Santa Barbara			1,821 60	1,862 48	
Santa Clara			196 62	266 26	
Santa Cruz			198 00	674 60	
Shasta			418 60	1,528 13	
Sierra			950 40	381 23	
Siskiyou	940 80	9,242 22	564 69	940 34	\$627 20
Solano	316 80	422 73	732 60	666 27	
Sonoma			3,519 45	1,675 58	
Stanislaus		1,464 24	2,108 85	3,349 94	
Sutter		61 77	445 50	313 81	
Tehama		158 40	2,079 00	2,912 27	\$189 19
Trinity			831 60	173 55	
Tulare		188 16	1,640 36	3,338 99	
Tuolumne			1,100 05	246 79	
Ventura			306 01	137 49	
Yolo			2,535 43	2,650 29	
Yuba			287 47	619 36	
Totals	\$10,712 02	\$19,232 29	\$83,102 52	\$88,350 50	\$189 19
					\$658 88

RECEIPTS FOR THE TWENTY-EIGHTH FISCAL YEAR—Continued.

COUNTIES.	Reclamation Tax, Levee District No. 5-----	Swamp and Overflowed Lands, District No. 5--	Swamp and Overflowed Lands, District No. 18--	Estates of Deceased Per- sons-----	State Loan Tax-----
Alameda-----				\$1,233 21	\$7 03
Calaveras-----				90 75	
Los Angeles-----				2,111 34	
Napa-----				558 64	
Sacramento-----				3,085 15	
San Francisco-----		\$28 32			
San Joaquin-----				26 00	
San Luis Obispo-----				1,063 29	
Solano-----					
Sutter-----	\$32,676 69		\$177 34		
Yolo-----				34 92	
Yuba-----					
Totals-----	\$32,676 69	\$28 32	\$177 34	\$8,203 30	\$7 03

RECEIPTS FOR THE TWENTY-EIGHTH FISCAL YEAR—Continued.

MISCELLANEOUS SOURCES.	Amounts.
Cancellation of coupons	\$122 50
Commutation tax from Commissioner of Immigration	502 40
Fees from Secretary of State	12,390 10
Fees from Clerk of Supreme Court	8,455 25
Fees from Surveyor-General	7,879 75
Fees from Register State Land Office	2,975 75
Fees from Insurance Commissioner	12,495 21
Interest on bonds held in trust for School Fund—from State bonds \$107,760 00	
Interest on bonds held in trust for School Fund—from County bonds 5,303 91	
	113,063 91
Interest on bonds held in trust for University Fund	50,040 00
Money drawn from contingent expenses of the Controller's office for 27th fiscal year, and not used	11 20
Money returned by J. G. Estudillo	105 00
Money refunded by W. J. Curtis, District Attorney of San Bernardino County ..	17 00
Rent of State Capitol grounds	251 00
Rent of wharves and docks in San Francisco	305,903 09
Sale of ballot paper	589 90
Sale of Codes	37 50
Sale of Geological Survey Reports	133 60
Sale of old carpet in State Treasurer's office	30 00
Sale of Statutes of 1875-6 and Amendments to Codes	155 00
Sale of Supreme Court Reports	54 00
Sale of Tide Lands	475 90
	\$515,688 06
Deduct amount of interest on State Bonds held in trust for School and University Funds, as this amount is also included in receipts from property tax	157,800 00
Total from miscellaneous sources	\$357,888 06

RECAPITULATION OF RECEIPTS FOR THE TWENTY-EIGHTH FISCAL YEAR.

SOURCES.	Amounts.
Alameda County.....	\$253,848 78
Alpine County.....	2,937 35
Amador County.....	17,557 38
Butte County.....	71,120 47
Calaveras County.....	14,098 36
Colusa County.....	75,900 51
Contra Costa County.....	50,373 17
Del Norte County.....	5,412 46
El Dorado County.....	17,611 21
Fresno County.....	57,528 87
Humboldt County.....	38,310 43
Inyo County.....	11,645 61
Kern County.....	62,515 89
Lake County.....	16,801 24
Lassen County.....	6,140 99
Los Angeles County.....	109,260 20
Marin County.....	48,077 45
Mariposa County.....	10,884 96
Mendocino County.....	60,734 59
Merced County.....	48,614 06
Modoc County.....	8,417 38
Mono County.....	7,013 45
Monterey County.....	51,199 74
Napa County.....	62,420 86
Nevada County.....	52,069 08
Placer County.....	41,373 00
Plumas County.....	15,118 88
Sacramento County.....	129,763 71
San Benito County.....	29,927 97
San Bernardino County.....	21,833 02
San Diego County.....	21,994 52
San Francisco County.....	1,700,155 18
San Joaquin County.....	140,750 38
San Luis Obispo County.....	39,370 12
San Mateo County.....	49,934 34
Santa Barbara County.....	43,776 42
Santa Clara County.....	197,244 87
Santa Cruz County.....	42,779 46
Shasta County.....	14,362 53
Sierra County.....	13,044 49
Siskiyou County.....	29,432 20
Solano County.....	67,244 74
Sonoma County.....	110,362 89
Stanislaus County.....	47,447 12
Sutter County.....	60,874 10
Tehama County.....	29,672 13
Trinity County.....	6,311 93
Tulare County.....	35,751 49
Tuolumne County.....	12,530 11
Ventura County.....	23,298 48
Yolo County.....	75,290 97
Yuba County.....	31,230 70
From counties.....	\$4,191,370 24
From miscellaneous sources as per statement.....	357,888 06
Total.....	\$4,549,258 30

Expenditures for the Twenty-seventh Fiscal Year.

STATEMENT No. 3.

EXPENDITURES FOR THE TWENTY-SEVENTH FISCAL YEAR.

Statement showing the amount of each appropriation, the amount expended, the amount unexpended, and the total expended for the year commencing July 1st, 1875, and ending June 30th, 1876.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
	<i>Legislative Department.</i>				
March 30, 1874--	Per diem and mileage of Lieutenant-Governor and Senators-----	\$52,000 00	\$51,460 15	\$539 85	-----
March 30, 1874--	Pay of officers and Clerks of Senate-----	13,680 00	13,646 00	34 00	-----
March 30, 1874--	Contingent expenses of Senate-----	22,000 00	*22,000 00	-----	-----
	Total for Senate-----	-----	-----	-----	\$87,106 15
March 30, 1874--	Per diem and mileage of Assemblymen-----	\$101,500 00	\$100,394 50	\$1,105 50	-----
March 30, 1874--	Pay of officers and Clerks of Assembly-----	14,520 00	14,136 00	384 00	-----
March 30, 1874--	Contingent expenses of Assembly-----	33,000 00	25,859 81	7,140 19	-----
	Total for Assembly-----	-----	-----	-----	140,390 31
	<i>Judicial Department.</i>				
March 30, 1874--	Salaries of Justices Supreme Court-----	\$30,000 00	\$30,000 00	-----	-----
March 30, 1874--	Salaries of District Judges-----	105,250 00	104,833 26	\$416 74	-----
April 3, 1876--	Salaries of District Judges (deficiency)-----	2,082 00	1,583 33	498 67	-----
March 30, 1874--	Salary of Clerk of Supreme Court-----	4,000 00	4,000 00	-----	-----
March 30, 1874--	Salary of Deputy Clerk of Supreme Court-----	1,800 00	1,800 00	-----	-----
March 30, 1874--	Salary of Reporter of Supreme Court-----	6,000 00	6,000 00	-----	-----
March 30, 1874--	Salary of Photographic Reporter of Supreme Court-----	3,000 00	2,750 00	250 00	-----
March 30, 1874--	Salary of Secretary of Justices of Supreme Court-----	3,000 00	3,000 00	-----	-----
March 30, 1874--	Salary of Bailiff and Porter of Supreme Court-----	1,200 00	1,200 00	-----	-----
March 30, 1874--	Pay of Porter to Clerk of Supreme Court-----	250 00	250 00	-----	-----
March 30, 1874--	Postage and contingent expenses of Supreme Court-----	500 00	500 00	-----	-----

March 30, 1874..	Postage and contingent expenses of Clerk of Supreme Court.....	120 00		120 00	
March 30, 1868..	Support of Supreme Court Library (fees).....	1,260 00		1,260 00	
	Total for Judicial Department.....				157,296 59
<i>Executive Department.</i>					
March 30, 1874..	Salary of Governor.....	\$7,000 00		\$7,000 00	
March 30, 1874..	Salary of Private Secretary.....	2,400 00		2,400 00	
March 30, 1874..	Salary of Executive Clerk.....	2,400 00		2,400 00	
March 30, 1874..	Pay of Porter.....	600 00		600 00	
March 30, 1874..	Special contingents (secret service).....	2,500 00		907 50	\$4,592 50
March 30, 1874..	Postage, expressage, and telegraphing.....	500 00		421 00	79 00
	Total for Governor's office.....				13,728 50
March 30, 1874..	Salary of Secretary of State.....	\$4,000 00		\$4,000 00	
March 30, 1874..	Salary of Deputy.....	2,400 00		2,400 00	
March 30, 1874..	Salaries of Clerks.....	9,600 00		9,600 00	
March 30, 1874..	Pay of Porter.....	300 00		275 00	\$25 00
March 30, 1874..	Postage and expressage.....	1,400 00		1,400 00	
Jan. 27, 1876..	Postage and expressage (deficiency).....	1,100 00		1,011 66	88 34
March 30, 1874..	Contingent expenses.....	150 00		150 00	
	Total for Secretary of State's office.....				18,836 66
March 30, 1874..	Salary of Controller.....	\$4,000 00		\$3,965 48	
March 30, 1874..	Salary of Deputy.....	3,000 00		3,000 00	\$34 52
March 30, 1874..	Salary of Book-keeper.....	2,400 00		2,400 00	
March 30, 1874..	Salaries of Clerks.....	9,000 00		7,350 00	
March 30, 1874..	Pay of Porter.....	300 00		300 00	1,650 00
March 30, 1874..	Postage and expressage.....	500 00		192 61	307 39
March 30, 1874..	Prosecution of delinquents.....	1,000 00		1,000 00	
March 30, 1874..	Contingent expenses.....	200 00		146 50	53 50
March 30, 1874..	Printing and engraving Controller's warrants.....	500 00		367 55	132 45
	Total for Controller's office.....				18,722 14
	Amount carried forward.....				\$436,080 35

*NOTE.—\$500 00 included in this amount was returned and paid into the State treasury by J. M. Montgomery (see receipts).

EXPENDITURES FOR THE TWENTY-SEVENTH FISCAL YEAR—Continued.

Date of Act.	Appropriation.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
March 30, 1874.	Amount brought forward				\$436,080 35
March 30, 1874.	Salary of Treasurer	\$4,000 00	\$4,000 00		
March 30, 1874.	Salaries of Clerks	4,200 00	4,200 00		
March 30, 1874.	Salaries of Watchmen	2,400 00	2,400 00		
March 30, 1874.	Pay of Porter	300 00	300 00		
March 30, 1874.	Postage and expressage	150 00	150 00		
March 30, 1874.	Pasting and canceling coupons	500 00	500 00		
	Total for Treasurer's office				11,550 00
March 30, 1874.	Salary of Attorney-General	\$4,000 00	\$4,000 00		
March 30, 1874.	Salary of Clerk	1,800 00	1,800 00		
March 30, 1874.	Pay of Porter	200 00	200 00		
March 30, 1874.	Costs and expenses of suits wherein the State is a party in interest	4,000 00	3,174 40	\$825 60	
March 30, 1874.	Postage and contingent expenses.	150 00	150 00		
	Total for Attorney-General's office				9,324 40
March 30, 1874.	Salary of Surveyor-General	\$2,000 00	\$2,000 00		
March 30, 1874.	Salary of Deputy	2,400 00	2,400 00		
March 30, 1874.	Salaries of Clerks	5,400 00	5,400 00		
March 30, 1874.	Pay of Porter	300 00	300 00		
March 30, 1874.	Binding books, and contingent expenses	100 00		\$100 00	
March 30, 1874.	Binding books, and contingent expenses for 26th fiscal year.	100 00	100 00		
March 30, 1874.	Postage and expressage	250 00	250 00		
March 30, 1874.	Purchase of maps	300 00	300 00		
March 30, 1874.	Copying maps	250 00	181 00	69 00	
	Total for Surveyor-General's office				10,931 00
March 30, 1874.	Salary of Register of State Land Office	\$2,000 00	\$2,000 00		
March 30, 1874.	Salaries of Clerks	3,600 00	3,600 00		
March 30, 1874.	Postage and expressage	250 00	250 00		
March 36, 1874.	Binding books, and contingent expenses	100 00		\$100 00	

March 30, 1874	Binding books, and contingent expenses for 26th fiscal year	100 00	100 00	5,950 00
	Total for Register State Land Office			
March 30, 1874	Salary of Superintendent of Public Instruction	\$3,000 00	\$3,000 00	
March 30, 1874	Salary of Deputy	1,800 00	1,800 00	
March 30, 1874	Salary of Clerk	1,500 00	1,500 00	
March 30, 1874	Pay of Porter	200 00	200 00	
March 30, 1874	Postage and expressage	800 00	800 00	
March 30, 1874	Travelling expenses	1,500 00	625 00	\$875 00
March 30, 1874	Contingent expenses	200 00	200 00	
March 30, 1874	Binding documents	150 00	111 00	39 00
	Total for office of Superintendent of Public Instruction			8,236 00
March 30, 1874	Salary of Secretary of State Board of Health	\$2,500 00	\$2,264 12	\$135 88
March 30, 1874	Mileage and contingent expenses State Board of Health	1,614 60	1,498 40	116 20
	Total for State Board of Health			3,862 52
March 30, 1874	Salaries of members of State Board of Equalization appointed by Governor	\$4,800 00	\$4,800 00	
March 23, 1876	Deficiency for 26th and 27th fiscal years for salaries of members appointed by Governor	3,000 00	3,000 00	
April 3, 1876	Deficiency for salaries of ex officio members	680 00	380 00	\$300 00
March 30, 1874	Salary of Clerk State Board of Equalization	1,800 00	1,800 00	
March 23, 1876	Deficiency for salary of Clerk State Board of Equalization	600 00	600 00	
March 30, 1874	Postage, expressage, and contingent expenses	500 00	500 00	
	Total for State Board of Equalization			11,080 00
April 3, 1876	Salaries of members of State Board of Examiners (deficiency)	\$1,984 14	\$1,983 36	78
March 30, 1874	Salary of Clerk State Board of Examiners	1,200 00	1,200 00	
March 30, 1874	Salary of State Printing Expert	600 00	224 99	375 01
March 30, 1874	Contingent expenses of Board of Examiners	250 00	95 00	155 00
	Total for State Board of Examiners			3,503 35
March 30, 1874	Salary of Insurance Commissioner	\$3,000 00	\$3,000 00	
March 30, 1874	Salary of Clerk	1,800 00	1,800 00	
	Amount carried forward	\$4,800 00	\$4,800 00	\$500,517 62

EXPENDITURES FOR THE TWENTY-SEVENTH FISCAL YEAR—Continued.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
March 30, 1874	Amount brought forward ----- Rent of office, printing, etc.----- Total for office of Insurance Commissioner-----	\$4,800 00 5,000 00	\$4,800 00 5,000 00		\$500,517 62
March 30, 1874	Salary of State Librarian-----	\$3,000 00	\$3,000 00		9,800 00
March 30, 1874	Salaries of Deputies-----	3,600 00	3,600 00		
March 30, 1874	Pay of Porter-----	600 00	600 00		
March 30, 1874	Postage and expressage-----	400 00	309 05	\$90 95	
May 17, 1861	Support of State Library (fees)----- Total for State Library-----	14,020 17	14,020 17		21,329 22
March 30, 1874	Construction of State Printing Office-----	\$6,704 70	\$6,698 89	\$5 81	
April 3, 1876	Transfer from purchase of material to construction of State Print- ing Office.-----	374 88	374 88		
March 30, 1874	Purchase of material-----	} 19,625 12 2,400 00 1,000 00 40,000 00	19,625 12		
	Less transfer as above-----		2,273 33	126 67	
March 30, 1874	Salary of Superintendent State Printing Office-----		1,000 00		
Dec. 22, 1875	Contingent expenses of Superintendent-----		39,077 76	922 24	
Dec. 22, 1875	Support of State Printing Office----- Total for State Printing Office-----				69,049 98
March 30, 1874	Salary of Tide Land Clerk-----	\$1,420 00	\$1,420 00		
March 30, 1868	Expense of survey and sale of tide lands----- Total for tide lands-----	6,992 74	6,992 74		8,412 74
March 30, 1874	Pay of permanent employes Capitol building and grounds-----	\$10,800 00	\$10,800 00		
March 17, 1876	Deficiency for 26th and 27th fiscal years for pay of permanent employes Capitol building and grounds-----	3,600 00	3,255 00	\$345 00	
March 2, 1866	Construction of State Capitol-----	8,379 39	8,379 39		
March 17, 1876	Deficiency for 26th and 27th fiscal years for construction of State Capitol-----	5,000 00	3,294 08	1,705 92	

April 3, 1876	Total for Capitol building and grounds				25,728 47
	Salaries and expenses Transportation Commissioners (deficiency)	\$1,275 00	\$1,016 77	\$258 23	
	Total for Transportation Commissioners				
March 30, 1874	Salary of Guardian Yosemite Valley	\$500 00	\$500 00		
March 30, 1874	Incidental expenses of Commissioners	500 00	500 00		1,016 77
	Total for Yosemite Valley				1,000 00
March 30, 1874	Relief of John A. Sutter	\$2,500 00	\$2,500 00		
March 30, 1874	Relief of James W. Marshall	1,200 00	1,200 00		
Dec. 20, 1875	Relief of Samuel A. Booker	416 66	416 66		
Feb. 24, 1876	Relief of John Jackson	6,500 00	6,500 00		
Feb. 28, 1876	Widow and family of J. W. Mandeville	4,000 00	4,000 00		
March 9, 1876	Claim of A. L. Bancroft & Co.	2,700 00	2,700 00		
April 3, 1876	Relief of E. O. F. Hastings (deficiency)	1,344 98	1,344 98		
April 3, 1876	Relief of George W. Whitlock (deficiency)	450 00	450 00		
	Total for relief				19,111 64
March 30, 1874	Aid to St. Vincent's Orphan Asylum, Santa Barbara	\$1,000 00	\$1,000 00		
March 30, 1874	Magdalen Asylum, San Francisco	2,500 00	2,500 00		
March 30, 1874	San Francisco Female Hospital	3,000 00	3,000 00		
March 30, 1874	Ladies' Protection and Relief Society	3,750 00	3,750 00		
March 30, 1874	California State Women's Hospital	2,000 00	2,000 00		
March 30, 1874	San Francisco Lying-in and Foundling Hospital	3,000 00	3,000 00		
March 30, 1874	Protestant Episcopal Church Home, San Francisco	500 00	500 00		
March 30, 1874	Old Women's Home, Rincon Hill, San Francisco	500 00	500 00		
March 30, 1874	Sisters of Mercy Hospital, Los Angeles	750 00	750 00		
March 30, 1874	Howard Benevolent Association, Sacramento	1,250 00	1,250 00		
March 30, 1874	Stockton Ladies' Benevolent Association	500 00	500 00		
March 30, 1874	St. Luke's Hospital, San Francisco	500 00	500 00		
March 30, 1874	Marysville Benevolent Association	500 00	500 00		
March 30, 1874	Napa Ladies' Relief and Protection Society	500 00	500 00		
March 30, 1874	Placerville Ladies' Relief Society	500 00	500 00		
March 30, 1874	Grass Valley Ladies' Relief Society	500 00	500 00		
March 30, 1874	Vallejo Ladies' Benevolent Association	500 00	500 00		
March 30, 1874	Oakland Ladies' Relief Society	500 00	500 00		
March 30, 1874	San José Ladies' Benevolent Society	500 00	500 00		
	Amount carried forward	\$22,750 00	\$22,750 00		\$656,166 44

EXPENDITURES FOR THE TWENTY-SEVENTH FISCAL YEAR--Continued.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
March 30, 1874	Amount brought forward	\$22,750 00	\$22,750 00		\$656,166 44
March 30, 1874	Nevada City Ladies' Benevolent Society	500 00	500 00		
March 30, 1874	San Diego Benevolent Society	500 00	500 00		
March 30, 1874	Support of inmates of Orphan Asylums, 26th fiscal year		15,686 05		
March 30, 1874	Support of inmates of Orphan Asylums, 27th fiscal year		47,624 42		
	Total for charitable institutions				87,060 47
March 26, 1872	Support of State University		\$50,290 88		
March 30, 1874	Support of State University Library	\$2,400 00	2,400 00		
March 30, 1874	Aid to State University	40,000 00	40,000 00		
	Total for State University				92,690 88
March 30, 1874	Support of State Normal School	\$17,695 32	\$17,695 32		
March 25, 1876	Support of State Normal School (deficiency)	5,000 00	5,000 00		
March 25, 1876	Repairs and furniture for State Normal School	8,000 00	3,816 14	\$4,183 86	
March 30, 1874	Purchase of books for State Normal School	966 44	966 44		
March 30, 1874	Purchase of apparatus for State Normal School	258 19	258 20		
	Total for State Normal School				27,736 10
March 30, 1874	Traveling expenses State Board of Education	\$500 00	\$500 00		
April 2, 1876	Traveling expenses State Board of Education (deficiency)	200 00	200 00		
March 30, 1874	Services of State Board of Examination	800 00	733 32	\$66 68	
	Total for State Educational Boards				1,433 32
	<i>For support of Schools.</i>				
	Alameda County	\$71,654 40	\$71,654 40		
	Alpine County	652 80	652 80		
	Anador County	18,286 08	18,286 08		
	Butte County	26,757 12	26,757 12		

Calaveras County	17,018 88	17,018 88
Colusa County	18,017 28	18,017 28
Contra Costa County	23,400 96	23,400 96
Del Norte County	3,440 64	3,440 64
El Dorado County	17,932 80	17,932 80
Fresno County	10,736 64	10,736 64
Humboldt County { Twenty-sixth fiscal year	1,297 78	
Humboldt County { Twenty-seventh fiscal year	21,987 84	23,285 62
Inyo County	3,048 96	3,048 96
Kern County	7,656 96	7,656 96
Lake County	10,513 92	10,513 92
Lassen County	5,122 56	5,122 56
Los Angeles County	59,804 16	59,804 16
Marin County	12,648 96	12,648 96
Mariposa County	7,142 40	7,142 40
Mendocino County	21,565 44	3,425 76
Merrick County	8,993 28	8,993 28
Modoc County	6,497 28	6,497 28
Mono County	860 16	860 16
Monterey County	25,236 48	25,236 48
Napa County	21,672 96	21,672 96
Nevada County	36,134 40	36,134 40
Placer County	19,345 92	19,345 92
Plumas County	6,405 12	6,405 12
Sacramento County	49,781 76	49,781 76
San Benito County	11,182 08	11,182 08
San Bernardino County	15,137 28	15,137 28
San Diego County	14,085 12	14,085 12
San Francisco County	315,041 28	315,041 28
San Joaquin County	40,028 16	40,028 16
San Luis Obispo County	15,452 16	15,452 16
San Mateo County	17,971 20	17,971 20
Santa Barbara County	17,525 76	17,525 76
Santa Clara County	64,588 80	64,588 80
Santa Cruz County	24,668 16	24,668 16
Shasta County	11,650 56	11,650 56
Sierra County	8,563 20	1,360 30
Siskiyou County	13,094 40	2,080 10
Solano County	35,558 40	35,558 40
Sonoma County	53,783 04	53,783 04
Stanislaus County	14,661 12	14,661 12
Amount carried forward	\$1,206,604 66	\$1,170,247 78
	\$36,356 88	\$865,087 21

EXPENDITURES FOR THE TWENTY-SEVENTH FISCAL YEAR—Continued.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
	Amount brought forward	\$1,206,604 66	\$1,170,247 78	\$36,356 88	\$865,087 21
	Sutter County	11,896 32	11,896 32		
	Tehama County	10,944 00	10,944 00		
	Trinity County	4,930 56	4,930 56		
	Tulare County	21,788 16	21,788 16		
	Tuolumne County	14,376 96	14,376 96		
	Ventura County	8,616 96	8,616 96		
	Yolo County	19,706 88	19,706 88		
	Yuba County	20,037 12	20,037 12		
	California Teacher	3,892 50	3,892 50		
	Total for support of Schools				1,286,437 24
March 30, 1874.	Education and care of deaf, dumb, and blind	\$39,000 00	\$56,000 00	\$3,000 00	
March 30, 1874.	Improvement of grounds for Deaf, Dumb, and the Blind Asylum	2,500 00	2,500 00		
Feb. 15, 1876.	Erecting and furnishing temporary building for deaf, dumb, and blind	27,000 00	27,000 00		
	Total for Deaf, Dumb, and the Blind Asylum				65,500 00
March 30, 1874.	Support of State Prison	\$100,000 00	\$100,000 00		
March 17, 1876.	Support of State Prison (deficiency)	42,000 00	42,000 00		
April 3, 1876.	Support of State Prison (deficiency)	24,000 00	23,750 00	\$250 00	
March 31, 1876.	Construction of work-shop, etc., California State Prison	200,000 00	25,000 00	175,000 00	
March 27, 1874.	Erection and maintenance of Branch State Prison	110,856 83	25,362 10	85,494 73	
March 30, 1874.	Transportation of prisoners.	22,511 65	22,511 65		
March 17, 1876.	Transportation of prisoners (deficiency)	6,000 00	3,164 60	2,835 40	
March 30, 1874.	Contingent expenses of Lieutenant-Governor as Warden of State Prison	200 00		200 00	
	Total for State Prison				241,788 35
March 30, 1874.	Support of Insane Asylum, Stockton	\$210,000 00	\$210,000 00		
March 30, 1874.	Transportation of insane	15,000 00	15,000 00		
March 17, 1876.	Transportation of insane (deficiency)	25,000 00	25,000 00		
April 3, 1876.	Transportation of insane (deficiency)	10,000 00	4,514 20	\$5,485 80	
March 30, 1874.	Completion of Napa State Insane Asylum	300,000 00	300,000 00		

April 1, 1876-----	Completion of Napa State Insane Asylum (deficiency)-----	494,000 0	167,001 17	326,998 83	-----
April 3, 1876-----	Support of Napa State Asylum for the Insane (deficiency)-----	48,000 00	48,000 00	-----	-----
March 30, 1874-----	Traveling expenses of Superintendent of Insane Asylum-----	400 00	-----	400 00	-----
March 30, 1874-----	Improvements of grounds of Insane Asylum-----	5,000 00	5,000 00	-----	-----
March 30, 1874-----	Purchase of burial grounds for Insane Asylum-----	1,500 00	1,362 48	137 52	-----
	Total for Insane Asylums-----	-----	-----	-----	775,877 85
March 30, 1874-----	Printing, paper, and official advertisements-----	\$50,000 00	\$50,000 00	-----	-----
March 17, 1876-----	Printing, paper, and official advertisements (deficiency)-----	42,000 00	39,233 89	\$2,766 11	-----
	Total for printing, paper, and official advertisements-----	-----	-----	-----	89,233 89
March 30, 1874-----	Stationery, fuel, lights, etc., for members of Legislature and State officers-----	\$42,500 00	\$42,500 00	-----	-----
Jan. 27, 1876-----	Stationery, fuel, lights, etc., for members of Legislature and State officers (deficiency)-----	6,370 00	6,370 00	-----	-----
	Total for stationery, fuel, lights, etc.-----	-----	-----	-----	18,870 00
March 28, 1868-----	Annulment of certificates of purchase-----	\$748 85	\$748 85	-----	-----
April 4, 1870-----	Restitution of money for lands sold not the property of the State-----	6,802 27	6,802 27	-----	-----
March 30, 1874-----	Services of Registers and Receivers of United States Land Offices-----	2,161 42	2,161 42	-----	-----
March 30, 1874-----	Traveling expenses of Surveyor-General, Attorney-General, and United States Surveyor-General-----	750 00	653 00	\$97 00	-----
March 26, 1876-----	Swamp Land District No. 5, advertising delinquent list-----	459 00	459 00	-----	-----
	Total for lands-----	-----	-----	-----	10,824 54
Feb. 23, 1876-----	Improvement of wharves and docks in San Francisco-----	\$146,716 67	\$146,716 67	-----	-----
	Total for wharves, docks, etc.-----	-----	-----	-----	146,716 67
April 28, 1857-----	Redemption of civil bonds of 1857-----	\$143,558 14	\$143,558 14	-----	-----
April 30, 1860-----	Redemption of civil bonds of 1860-----	85,471 01	85,471 01	-----	-----
	Total for redemption of bonds-----	-----	-----	-----	229,032 18
April 28, 1857-----	Payment of interest on civil bonds of 1857-----	\$5,075 00	\$5,075 00	-----	-----
April 30, 1860-----	Payment of interest on civil bonds of 1860-----	3,062 50	3,062 50	-----	-----
April 27, 1863-----	Payment of interest on Soldiers' Relief bonds-----	6,685 00	6,685 00	-----	-----
	Amount carried forward-----	\$14,822 50	\$14,822 50	-----	\$3,729,367 93

EXPENDITURES FOR THE TWENTY-SEVENTH FISCAL YEAR—Continued.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
April 4, 1864.	Amount brought forward	\$14,822 50	\$14,822 50		\$3,729,367 93
April 4, 1870.	Payment of interest on Pacific Railroad bonds	105,000 00	105,000 00		
March 28, 1872.	Payment of interest on State Capital bonds of 1870	17,500 00	17,500 00		
April 2, 1870.	Payment of interest on State Capital bonds of 1872	17,500 00	17,500 00		
Feb. 20, 1872.	Payment of interest on civil bonds of 1873	168,060 00	168,060 00		
March 25, 1874.	Payment of canceled coupons	17 50	17 50		
	Payment of interest on Levee District No. 5 bonds	1,160 00	1,160 00		
	Total for interest on bonds				324,060 00
March 30, 1874.	Salary of Adjutant-General	\$3,000 00	\$3,000 00		
March 30, 1874.	Salary of Assistant Adjutant-General	2,000 00	1,972 18	\$27 82	
March 30, 1874.	Pay of Porter in office of Adjutant-General	300 00	300 00		
March 30, 1874.	Salary of State Armorer	1,800 00	900 00	900 00	
March 30, 1874.	Postage and expressage	200 00	200 00		
March 30, 1874.	Cleaning and transportation of arms	750 00	750 00		
March 30, 1868.	Expense of maintaining National Guard	978 77	978 77		
March 30, 1874.	Payment of Armory rent, etc, of National Guard	35,903 58	31,115 01	4,790 57	
	Total for military purposes				39,215 96
	<i>Miscellaneous.</i>				
March 30, 1874.	Arresting criminals without the limits of the State				
March 30, 1874.	Care of State burial grounds	\$1,500 00	\$641 50	\$858 50	
March 17, 1876.	Insurance of State Printing Office and Governor's Mansion building	600 00	600 00		
Feb. 20, 1872.	Payment of canceled warrants	1,100 00	1,100 00		
Sec. 1,034 Political Code.		1,725 25	1,725 25		
Sec. 1,696 Civil Procedure	Payment of election rewards	100 00	100 00		
April 25, 1857.	Payment to heirs of Robert Hill	141 05	141 05		
March 30, 1874.	Payment of Indian war bonds	8,814 65	77 31	8,737 34	
March 27, 1874.	Payment of rewards offered by Governor	2,000 00	1,750 00	250 00	
January 28, 1876.	Preservation of materials, geological survey	4,351 95	4,351 95		
April 1, 1876.	Purchase of Supreme Court Reports for Modoc County	732 75	732 75		
	Redemption of State stamps.	10,545 41	9,062 48	1,482 93	

March 30, 1874.	Restoration and preservation of fish	2,500 00	2,500 00	
Feb. 10, 1876.	Translating into Spanish laws of the twentieth session of the Legislature (deficiency)	2,463 01	2,463 00	04
	Total for miscellaneous purposes			\$25,245 29
	Total expenditures			\$4,117,889 18
	Deduct amount paid for interest on State bonds held in trust by State Treasurer (\$155,925 00); said amount being included twice in expenditures, to wit: once in the payment of interest on bonds, and once in the support of Common Schools and State University			\$155,925 00
	Making the total actual expenditures			\$3,961,964 18

SAN FRANCISCO
PUBLIC LIBRARY

RECAPITULATION

OF EXPENDITURES FOR THE TWENTY-SEVENTH FISCAL YEAR.

FOR WHAT PURPOSE EXPENDED.	Amounts.
Legislative Department	\$227,496 46
Judicial Department	157,296 59
Governor's office	13,728 50
Secretary of State's office	18,836 66
Controller's office	18,722 14
Treasurer's office	11,550 00
Attorney-General's office	9,324 40
Surveyor-General's office	10,931 00
Register of State Land Office	5,950 00
Superintendent of Public Instruction's office	8,236 00
State Board of Health	3,862 52
State Board of Equalization	11,080 00
State Board of Examiners	3,503 35
Insurance Commissioner's office	9,800 00
State Library	21,529 22
State Printing Office	69,049 98
Tide lands	8,412 74
Capitol building and grounds	25,728 47
Transportation Commissioners	1,016 77
Yosemite Valley Guardian and Commissioners	1,000 00
Relief	19,111 64
Charitable institutions	87,060 47
State University	92,690 88
State Normal School	27,736 10
State Educational Boards	1,433 32
Support of schools	1,286,437 24
Deaf, Dumb and the Blind Asylum	65,500 00
State Prison	241,788 35
State Insane Asylums	775,877 85
Printing, paper, and official advertisements	89,233 89
Stationery, fuel, lights, etc.	18,870 00
Lands	10,824 54
Wharves, docks, etc., in San Francisco	146,716 67
Redemption of bonds	229,032 18
Payment of interest on bonds	\$324,060 00
Less interest on bonds held in trust by State Treasurer	155,925 00
	168,135 00
Military purposes	39,215 96
Miscellaneous purposes	25,245 29
Total expenditures	\$3,961,964 18

Expenditures for the Twenty-eighth Fiscal Year.

STATEMENT No. 4.

EXPENDITURES FOR THE TWENTY-EIGHTH FISCAL YEAR.

Statement showing the amount of each appropriation, the amount expended, the amount unexpended, and total expended, for the year commencing July 1st, 1876, and ending June 30th, 1877.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
March 30, 1874	Contingent expenses of Assembly, 27th fiscal year	\$7,140 19	\$70 62	\$7,069 57	\$70 62
	<i>Legislative Department.</i>				
	<i>Judicial Department.</i>				
April 3, 1876	Salaries of Justices Supreme Court	\$30,000 00	\$30,000 00		
April 3, 1876	Salaries of District Judges	114,000 00	114,000 00		
April 3, 1876	Salary of Clerk Supreme Court	4,000 00	4,000 00		
April 3, 1876	Salary of Deputy Clerk Supreme Court	1,800 00	1,800 00		
April 3, 1876	Salary of Reporter of Supreme Court	6,000 00	6,000 00		
April 3, 1876	Salary of Photographic Reporter of Supreme Court	3,000 00	3,000 00		
April 3, 1876	Salary of Secretary of Justices Supreme Court	3,000 00	3,000 00		
April 3, 1876	Salary of Bailiff and Porter Supreme Court	1,200 00	1,200 00		
April 3, 1876	Pay of Porter to Clerk Supreme Court	200 00	200 00		
April 3, 1876	Postage and contingent expenses of Supreme Court	250 00	250 00		
April 3, 1876	Postage and expressage for Clerk Supreme Court	150 00	150 00		
April 3, 1876	Support of Supreme Court Library (fees)		1,806 65		
	Total for Judicial Department				165,406 05
	<i>Executive Department.</i>				
April 3, 1876	Salary of Governor	\$7,000 00	\$7,000 00		
April 3, 1876	Salary of Private Secretary	2,400 00	2,400 00		
April 3, 1876	Salary of Executive Clerk	2,400 00	2,400 00		
April 3, 1876	Pay of Porter	600 00	600 00		
April 3, 1876	Special contingents (secret service)	2,500 00	1,905 50	\$594 50	

April 3, 1876	Postage, expressage, and telegraphing	500 00	250 00	250 00	250 00
March 30, 1874	Special contingents (secret service), 27th fiscal year	1,592 50	50 00	1,542 50	1,542 50
	Total for Governor's office				14,605 50
April 3, 1876	Salary of Secretary of State	\$4,000 00	\$4,000 00	\$4,000 00	
April 3, 1876	Salary of Deputy Secretary of State	2,400 00	2,400 00	2,400 00	
April 3, 1876	Salaries of Clerks	8,850 00	\$1,000 00	\$750 00	
April 3, 1876	Pay of Porter	150 00	150 00	150 00	
March 30, 1874	Pay of Porter, 27th fiscal year	25 00	25 00	25 00	
April 3, 1876	Postage, expressage, and telegraphing	1,400 00	1,400 00	1,400 00	
March 30, 1874	Postage, expressage, etc., 27th fiscal year	88 34	3 50	84 84	
April 3, 1876	Contingent expenses	100 00	100 00	100 00	
	Total for Secretary of State's office				16,178 50
April 3, 1876	Salary of Controller	\$4,000 00	\$4,000 00	\$4,000 00	
April 3, 1876	Salary of Deputy	3,000 00	3,000 00	3,000 00	
April 3, 1876	Salary of Book-keeper	2,400 00	2,400 00	2,400 00	
April 3, 1876	Salaries of Clerks	9,000 00	7,200 00	\$1,800 00	
April 3, 1876	Pay of Porter	300 00	300 00	300 00	
April 3, 1876	Postage and expressage	500 00	116 97	383 03	
March 30, 1874	Postage and expressage, 27th fiscal year	307 39	12 58	294 81	
April 3, 1876	Contingent expenses	100 00	46 40	53 60	
	Total for Controller's office				17,075 95
April 3, 1876	Salary of Treasurer	\$4,000 00	\$4,000 00	\$4,000 00	
April 3, 1876	Salaries of Clerks	4,200 00	4,200 00	4,200 00	
April 3, 1876	Salaries of Watchmen	2,400 00	2,400 00	2,400 00	
April 3, 1876	Pay of Porter	150 00	150 00	150 00	
April 3, 1876	Postage and expressage	150 00	150 00	150 00	
	Total for State Treasurer's office				10,900 00
April 3, 1876	Salary of Attorney-General	\$4,000 00	\$4,000 00	\$4,000 00	
April 3, 1876	Salary of Clerk	1,800 00	1,800 00	1,800 00	
April 3, 1876	Pay of Porter	100 00	100 00	100 00	
April 3, 1876	Costs and expenses of suits wherein the State is a party in interest	4,000 00	3,302 50	\$697 50	
March 30, 1874	Costs and expenses of suits wherein the State is a party in interest, 27th fiscal year	825 60	400 00	425 60	
	Amount carried forward	\$10,725 60	\$9,602 50	\$1,123 10	\$224,236 62

EXPENDITURES FOR TWENTY-EIGHTH FISCAL YEAR—Continued.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
April 3, 1876	Amount brought forward				
	Postage of Attorney-General	\$10,725 60 100 00	\$9,602 50 100 00	\$1,123 10	\$24,236 62
	Total for Attorney-General's office				9,702 50
April 3, 1876	Salary of Surveyor-General	\$2,000 00	\$2,000 00		
April 3, 1876	Salary of Deputy	2,400 00	2,400 00		
April 3, 1876	Salaries of Clerks	5,400 00	5,400 00		
April 3, 1876	Pay of Porter	300 00	300 00		
April 3, 1876	Postage and expressage	125 00	125 00		
April 3, 1876	Purchase of maps	200 00		\$200 00	
April 3, 1876	Copying maps	150 00		150 00	
March 30, 1874	Copying maps, 27th fiscal year	69 00		19 00	
	Total for Surveyor-General's office				10,275 00
April 3, 1876	Salary of Register of State Land Office	\$2,000 00	\$2,000 00		
April 3, 1876	Salaries of Clerks	3,600 00	3,600 00		
April 3, 1876	Postage and expressage	275 00	275 00		
	Total for State Land Office				5,875 00
April 3, 1876	Salary of Superintendent of Public Instruction	\$3,000 00	\$3,000 00		
April 3, 1876	Salary of Deputy	1,800 00	1,800 00		
April 3, 1876	Salary of Clerk	1,500 00	1,500 00		
April 3, 1876	Pay of Porter	200 00	200 00		
April 3, 1876	Postage and expressage	800 00	686 71	\$113 29	
April 3, 1876	Traveling expenses	1,500 00	1,000 00	440 00	
March 30, 1874	Traveling expenses, 27th fiscal year		653 00	222 00	
April 3, 1876	Contingent expenses	100 00	86 90	13 10	
March 30, 1874	Binding documents, 27th fiscal year	39 00	10 00	29 00	
	Total for office of Superintendent Public Instruction				8,996 61
April 2, 1876	Salary of Secretary of State Board of Health	\$2,500 00	\$2,499 60	40	

April 3, 1876.....	Mileage and contingent expenses State Board of Health.....	1,500 00	534 00	966 00	-----
March 30, 1874.....	Mileage and contingent expenses State Board of Health, 27th fiscal year.....	116 20	25 00	91 20	-----
	Total for State Board of Health.....				3,058 60
April 3, 1876.....	Salaries of members State Board of Examiners.....	\$3,500 00	\$3,500 00		-----
April 3, 1876.....	Salary of Clerk State Board of Examiners.....	1,120 00	1,120 00		-----
March 30, 1876.....	Contingent expenses, 27th fiscal year.....	155 00	25 00	\$130 00	-----
	Total for State Board of Examiners.....				4,725 00
April 3, 1876.....	Salary of Insurance Commissioner.....	\$3,000 00	\$3,000 00		-----
April 3, 1876.....	Salary of Clerk.....	1,800 00	1,800 00		-----
April 3, 1876.....	Rent and contingent expenses.....	2,500 00	2,031 90	\$468 10	-----
	Total for office of Insurance Commissioner.....				6,831 90
April 3, 1876.....	Salary of State Librarian.....	\$3,000 00	\$3,000 00		-----
April 3, 1876.....	Salaries of Deputies.....	3,600 00	3,600 00		-----
April 3, 1876.....	Pay of Porter.....	600 00	600 00		-----
April 3, 1876.....	Postage and expressage.....	200 00	200 00		-----
March 30, 1874.....	Postage and expressage, 27th fiscal year.....	90 95	15 28	\$75 67	-----
May 17, 1861.....	Support of State Library (fees).....		25,753 33		-----
	Total for State Library.....				33,148 61
April 3, 1876.....	Salary of Superintendent State Printing Office.....	\$2,400 00	\$2,400 00		-----
April 3, 1876.....	Support of State Printing Office.....	48,000 00	35,818 44	\$12,181 56	-----
Dec. 22, 1873.....	Support of State Printing Office, 27th fiscal year.....	922 24	922 20	04	-----
April 3, 1876.....	Repair and purchase of machinery.....	1,000 00	813 98	186 02	-----
April 3, 1876.....	Wages to temporary employes and contingent expenses.....	1,000 00	242 00	758 00	-----
	Total for State Printing Office.....				40,196 62
April 3, 1876.....	Pay of permanent employes Capitol building and grounds.....	\$14,400 00	\$13,850 00	\$550 00	-----
April 3, 1876.....	Permanent improvement State Capitol grounds.....	2,000 00	1,060 09	939 91	-----
April 3, 1876.....	Painting State Capitol.....	3,500 00	668 93	2,831 07	-----
April 3, 1876.....	Repairing and painting roof of State Capitol.....	2,500 00	59 75	2,440 25	-----
	Amount carried forward.....	\$22,400 00	\$15,638 77	\$6,761 23	\$347,046 46

EXPENDITURES FOR THE TWENTY-EIGHTH FISCAL YEAR--Continued.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unexpended.	Total Expended
March 2, 1866	Amount brought forward	\$22,400 00	\$15,658 77	\$6,761 23	\$347,046 46
March 17, 1876	Construction of State Capitol	1,865 58	1,865 58		
	Construction of State Capitol, deficiency for 26th and 27th fiscal years	1,705 92	1,236 60	469 32	
	Total for Capitol building and grounds				18,740 95
April 3, 1876	Salaries of Transportation Commissioners.	\$9,000 00	\$9,000 00		
April 3, 1876	Salary of Clerk	1,800 00	1,800 00		
April 3, 1876	Contingent expenses	300 00	300 00		
	Total for Transportation Commissioners				11,100 00
April 3, 1876	Salaries and expenses of State Land Commission	\$12,000 00	\$10,741 95	\$1,258 05	
	Total for State Land Commission				10,741 95
April 3, 1876	Aid to Magdalen Asylum, San Francisco	\$2,500 00	\$2,500 00		
April 3, 1876	Aid to San Francisco Female Hospital	3,000 00	3,000 00		
April 3, 1876	Aid to Ladies' Protection and Relief Society, San Francisco	3,750 00	3,750 00		
April 3, 1876	Aid to California State Woman's Hospital, San Francisco	2,000 00	2,000 00		
April 3, 1876	Aid to San Francisco Lying-in and Foundling Hospital	3,000 00	3,000 00		
April 3, 1876	Aid to Protestant Episcopal Church Home, San Francisco	500 00	500 00		
April 3, 1876	Aid to Old Woman's Home (Rincon Hill), San Francisco	750 00	750 00		
April 3, 1876	Aid to Little Sisters' Infant Shelter, San Francisco	1,000 00	1,000 00		
April 3, 1876	Aid to Sisters of Mercy Hospital, Los Angeles	1,000 00	1,000 00		
April 3, 1876	Aid to Howard Benevolent Association, Sacramento	1,250 00	1,250 00		
April 3, 1876	Aid to Stockton Ladies' Benevolent Association	500 00	500 00		
April 3, 1876	Aid to Marysville Benevolent Association	500 00	500 00		
April 3, 1876	Aid to Napa Ladies' Relief and Protection Society	500 00	500 00		
April 3, 1876	Aid to Ladies' Benevolent Society of Placerville	500 00	500 00		
April 3, 1876	Aid to St. Vincent de Paul Society, San José	250 00	250 00		
April 3, 1876	Aid to St. Luke's Hospital, San Francisco	750 00	750 00		
April 3, 1876	Aid to Scandinavian Ladies' Home, San Francisco	250 00	250 00		
April 3, 1876	Aid to Ladies' Relief Society, Sacramento	500 00	500 00		
April 3, 1876	Aid to California Prison Commission	1,000 00	1,000 00		

April 3, 1876	Aid to Valjejo Ladies' Benevolent Association	500 00	500 00		
April 3, 1876	Aid to Oakland Ladies' Relief Society	500 00	500 00		
April 3, 1876	Aid to San José Ladies' Benevolent Society	500 00	500 00		
April 3, 1876	Aid to San Diego Benevolent Society	500 00	500 00		
April 3, 1876	Aid to Pacific Dispensary for Women and Children, San Francisco	500 00	500 00		
April 3, 1876	Aid to Grass Valley Ladies' Relief Society	500 00	500 00		
April 3, 1876	Aid to Nevada City Benevolent Society	500 00	500 00		
April 3, 1876	Aid to Ladies' Aid Society, Petaluma	500 00	500 00		
April 3, 1876	Support of inmates of orphan asylums	69,107 24	69,107 24		
March 30, 1874	Support of inmates orphan asylums, 27th fiscal year	18,229 87	18,229 87		
	Total for charitable institutions				114,837 11
March 30, 1876	Payment of indebtedness of State Agricultural Society	\$16,141 89	\$16,141 89		16,141 89
April 3, 1876	Payment of the claim of John Breuner	650 00	650 00		650 00
April 1, 1876	Relief of James W. Marshall	1,200 00	1,200 00		1,200 00
March 26, 1872	Support of State University, (interest on bonds)		50,040 00		
	Total for State University				50,040 00
April 3, 1876	Support of State Normal School	\$24,000 00	\$23,522 85	\$177 15	
March 25, 1876	Repairs and furniture for State Normal School	4,183 86	4,183 86		
April 3, 1876	Purchase of books for State Normal School	500 00	339 25	140 75	
	Total for State Normal School				28,065 96
April 3, 1876	Traveling expenses State Board of Education	\$500 00	\$170 00	\$330 00	
April 3, 1876	Services of State Board of Examination	800 00	600 00	200 00	
March 30, 1874	Services of State Board of Examination, 27th fiscal year	66 68	66 64	04	
	Total for State Educational Boards				836 64
	<i>For support of Schools.</i>				
	Alameda County	\$88,474 26	\$88,474 26		
	Alpine County	678 30	678 30		
	Amador County	19,734 54	19,734 54		
	Butte County	28,592 34	28,592 34		
	Calaveras County	16,911 54	16,911 54		
	Colusa County	19,367 46	19,367 46		
	Amount carried forward	\$173,788 44	\$173,788 44		\$599,400 96

EXPENDITURES FOR THE TWENTY-EIGHTH FISCAL YEAR—Continued.

Date of Act.	APPROPRIATION.	Amount of Ap- propriation.	Amount Ex- pended.	Amount Unex- pended.	Total Expended.
	Amount brought forward				
	Contra Costa County	\$173,788 44	\$173,788 44		\$599,400 96
	Del Norte County	25,528 02	25,528 02		
	El Dorado County	3,495 24	3,495 24		
	Fresno County	19,215 84	19,215 84		
	Humboldt County	12,520 62	12,520 62		
	Inyo County	26,062 68	26,062 68		
	Kern County	2,880 78	2,880 78		
	Lake County	8,738 10	8,738 10		
	Lassen County	11,938 08	11,938 08		
	Los Angeles County	5,067 30	5,067 30		
	Marin County	74,365 62	74,365 62		
	Mariposa County	14,156 52	14,156 52		
	Mendocino County	7,213 92	7,213 92		
	Merced County	24,139 50	24,139 50		
	Modoc County	9,384 48	9,384 48		
	Mono County	6,200 46	6,200 46		
	Monterey County	997 50	997 50		
	Napa County	26,341 98	26,341 98		
	Nevada County	23,301 60	23,301 60		
	Placer County	37,841 16	37,841 16		
	Plumas County	20,317 08	20,317 08		
	Sacramento County	6,886 74	6,886 74		
	San Benito County	52,021 62	52,021 62		
	San Bernardino County	12,233 34	12,233 34		
	San Diego County	16,789 92	16,789 92		
	San Francisco County	13,302 66	13,302 66		
	San Joaquin County	368,979 24	368,979 24		
	San Luis Obispo County	41,464 08	41,464 08		
	San Mateo County	18,114 60	18,114 60		
	Santa Barbara County	19,965 96	19,965 96		
	Santa Clara County	21,593 88	21,593 88		
	Santa Cruz County	71,045 94	71,045 94		
	Shasta County	26,956 44	26,956 44		
	Sierra County	12,903 66	12,903 66		
	Siskiyou County	8,825 88	8,825 88		
		14,124 60	2,265 60	\$11,859 00	

Solano County	35,814 24	35,814 24	
Sonoma County	58,916 34	58,916 34	
Stanislaus County	13,457 26	13,457 26	
Sutter County	12,584 46	12,584 46	
Tehama County	12,975 48	12,975 48	
Trinity County	5,222 66	5,222 66	
Tulare County	25,009 32	25,009 32	
Tuolumne County	14,563 50	14,563 50	
Ventura County	10,565 52	10,565 52	
Yolo County	22,974 42	22,974 42	
Yuba	21,713 58	21,713 58	
Mendocino County, 27th fiscal year	\$1,474,600 26	\$1,462,741 26	
Siskiyou County, 27th fiscal year	18,139 68	18,139 68	
Sierra County, 27th fiscal year	11,014 30	11,014 30	
	7,202 90	7,202 90	
Total for support of schools			1,499 098 14
Purchase of bonds for School Fund	\$133,384 70	\$133,384 70	133,384 70
Education and care of deaf, dumb, and blind	\$36,000 00	\$36,000 00	
Education and care of deaf, dumb, and blind, 27th fiscal year	3,000 00	3,000 00	
Total for Deaf, Dumb, and the Blind Asylum			39,000 00
Support of State Prison	\$120,000 00	\$119,725 00	\$275 00
Support of State Prison, 27th fiscal year	250 00	250 00	
Construction of work-shop, etc., California State Prison	175,000 00	130,000 00	45,000 00
Transportation of prisoners	25,000 00	24,911 41	88 59
Transportation of prisoners (deficiency) for 26th and 27th fiscal years	2,835 40	932 00	1,903 40
Total for State Prison			275,818 41
Support of Insane Asylum, Stockton	\$210,000 00	\$202,500 00	\$7,500 00
Furnishing and support of Branch Insane Asylum at Napa	110,000 00	110,000 00	
Completion of Napa State Asylum for the Insane (deficiency)	326,998 83	280,247 43	46,751 40
Transportation of insane	30,000 00	17,686 95	12,313 05
Transportation of insane (deficiency) for 26th and 27th fiscal years	5,485 80	4,185 40	1,300 40
Total for Insane Asylums			614,619 78
Amount carried forward			\$3,161,321 99

EXPENDITURES FOR THE TWENTY-EIGHTH FISCAL YEAR—Continued.

Date of Act.	APPROPRIATION.	Amount of Appropriation.	Amount Expended.	Amount Unexpended.	Total Expended.
April 3, 1876	Amount brought forward				
March 17, 1876	Official advertising	\$2,500 00	\$1,634 00	\$866 00	\$3,161,321 99
	Printing, paper, and official advertisements, deficiency for 26th and 27th fiscal years	2,766 11	688 00	2,078 11	
	Total for official advertising				2,322 00
April 3, 1876	Stationery, fuel, lights, etc., for members of the Legislature and State officers	\$12,500 00	\$7,966 55	\$4,533 45	
	Total for stationery, fuel, lights, etc.				7,966 55
March 28, 1868	Annulment of certificates of purchase	\$9,339 93	\$9,339 93		
April 4, 1870	Restitution of money for lands sold not the property of the State.	7,413 36	7,413 36		
April 1, 1876	Restitution to counties of swamp land money received by the State prior to July 1, 1858.	11,957 08	11,957 08		
April 3, 1876	Services of Registers and Receivers of United States Land Office.	3,000 00		\$3,000 00	
April 3, 1876	Traveling expenses of Surveyor-General and Attorney-General.	750 00		750 00	
	Total for lands				28,710 37
Feb. 28, 1876	Improvement of wharves and docks in San Francisco	\$258,661 87	\$258,661 87		
	Total for wharves and docks.				258,661 87
April 28, 1857	Redemption of civil bonds of 1857	\$6,607 85	\$6,607 85		
April 30, 1860	Redemption of civil bonds of 1860	1,005 82	1,005 82		
	Total for redemption of bonds				7,613 67
April 27, 1862	Payment of interest on Soldiers' Relief bonds	\$6,685 00	\$6,685 00		
April 4, 1864	Payment of interest on Pacific Railroad bonds	105,000 00	105,000 00		
April 4, 1870	Payment of interest on State Capital bonds of 1870.	17,500 00	17,500 00		
March 28, 1872	Payment of interest on State Capital bonds of 1872.	17,500 00	17,500 00		
April 2, 1870	Payment of interest on civil bonds of 1873.	168,060 00	168,060 00		

Feb. 20, 1872	Payment of canceled coupons	700 00	700 00	315,445 00
	Total for interest on bonds			
March 25, 1874	Payment of interest on Levee District No. 5 bonds, Sutter County	32,680 00	32,680 00	32,680 00
April 3, 1876	Salary of Adjutant-General	\$3,000 00	\$3,000 00	
April 3, 1876	Salary of Assistant Adjutant-General	2,000 00	2,000 00	
April 3, 1876	Pay of Porter	300 00	300 00	
April 3, 1876	Postage and expressage	100 00	100 00	
April 3, 1876	Cleaning and transportation of arms	750 00	218 13	\$531 85
April 3, 1876	Payment of armory rent, etc., National Guard	30,000 00	18,771 00	11,229 00
March 30, 1876	Payment of armory rent, etc., deficiency for 25th fiscal year	17,905 00	17,905 00	
March 30, 1876	Payment of armory rent, etc., deficiency for 26th and 27th fiscal years	59,928 00	53,454 38	6,473 62
March 30, 1874	Payment of armory rent, etc., 27th fiscal year	4,790 57	2,395 00	2,395 57
	Total for military purposes			93,143 53
	Estate of Antoine Malazaine, deceased	Counsel fees.	\$26 51	
	Estate of James Duffly, deceased	Counsel fees.	19 06	
	Estate of Frederick Allendorf, deceased	Counsel fees.	10 28	
	Estate of F. Maddien, deceased	Counsel fees.	11 00	
	Estate of J. H. Watkins, deceased	Counsel fees.	19 55	
	Estate of Louis Vollmer, deceased	Counsel fees.	27 20	
	Estate of Thomas R. Mahan, deceased	Counsel fees.	260 00	
	Estate of Henry Curtis, deceased	Counsel fees.	306 00	
	Total for counsel fees from estates of deceased persons			679 60
	<i>Miscellaneous.</i>			
April 3, 1876	Arresting criminals without the limits of the State	\$1,500 00	\$1,500 00	
April 3, 1876	Building vault and doors for State treasury	2,500 00	2,500 00	
Feb. 20, 1872	Payment of canceled warrants	142 27	142 27	
April 25, 1857	Payment of Indian War bonds	8,757 34	141 58	\$8,595 76
April 3, 1876	Payment of rewards offered by Governor	2,000 00	300 00	
April 3, 1876	Payment of rewards offered by Governor, 27th fiscal year	250 00	250 00	1,700 00
April 3, 1876	Payment of rewards for arrest of highway robbers	1,500 00	1,500 00	
April 1, 1876	Payment of warrants under Act to authorize Drury Melone, John Lord Love, and James J. Green, to sue the State	5,400 00	5,377 66	22 34
	Amount carried forward	\$22,029 61	\$11,711 51	\$10,318 10
				\$3,913,544 58

EXPENDITURES FOR THE TWENTY-EIGHTH FISCAL YEAR—Continued.

Date of Act.	APPROPRIATION.	Amount of Appropriation.	Amount Expended.	Amount Unexpended.	Total Expended.
April 3, 1876.	Amount brought forward	\$22,029 61	\$11,711 51	\$10,318 10	\$3,913,544 58
April 3, 1876.	Purchase of ballot paper	7,500 00	5,000 00	2,500 00	
April 3, 1876.	Purchase of safe for State treasury	4,500 00	4,500 00		
April 3, 1876.	Purchase of Supreme Court Reports	2,700 00	1,800 00	900 00	
April 3, 1876.	Redemption of stamps sold by the State	1,482 93	105 26	1,377 67	
April 3, 1876.	Restoration and preservation of fish	5,000 00	5,000 00		
April 3, 1876.	Translating into Spanish the laws of the twenty-first session of the Legislature	1,250 00	1,250 00		
	Total for miscellaneous purposes				29,366 77
	Total expenditures				\$3,942,911 35
	Deduct amount paid for interest on State bonds held in trust by State Treasurer (\$157,800 00); said amount being included twice in expenditures, to wit: once in the payment of interest on bonds, and once in the support of Common Schools and State University				157,800 00
	Making the total actual expenditures				\$3,785,111 35

RECAPITULATION

OF EXPENDITURES FOR THE TWENTY-EGHTEH FISCAL YEAR.

FOR WHAT PURPOSE EXPENDED.	Amount.
Legislative Department.....	\$70 62
Judicial Department.....	165,406 05
Governor's office.....	14,605 50
Secretary of State's office.....	16,178 50
Controller's office.....	17,075 95
Treasurer's office.....	10,900 00
Attorney-General's office.....	9,702 50
Surveyor-General's office.....	10,275 00
Register of State Land Office.....	5,875 00
Superintendent of Public Instruction's office.....	8,996 61
State Board of Health.....	3,058 60
State Board of Examiners.....	4,725 00
Insurance Commissioner's office.....	6,831 90
State Library.....	33,148 61
State Printing Office.....	40,196 62
Capitol building and grounds.....	18,740 95
State Board of Transportation Commissioners.....	11,100 00
State Land Commission.....	10,741 95
Charitable institutions.....	114,837 11
Payment of indebtedness State Agricultural Society.....	16,141 89
Payment of claim of John Breuner.....	650 00
Relief of James W. Marshall.....	1,200 00
State University.....	50,040 00
State Normal School.....	28,065 96
State Educational Boards.....	836 64
Support of Common Schools.....	1,499,098 14
Purchase of bonds for School Fund.....	133,384 70
Deaf, Dumb and the Blind Institution.....	39,000 00
State Prison.....	275,818 41
Insane Asylums.....	614,619 78
Official advertising.....	2,322 00
Stationery, fuel, lights, etc.....	7,966 55
State School and Swamp Lands.....	28,710 37
Improvement of wharves and docks in San Francisco.....	258,661 87
Redemption of bonds.....	7,613 67
Payment of interest on bonds.....	\$315,445 00
Less interest on bonds held in trust by State Treasurer.....	157,800 00
	157,645 00
Payment of interest on bonds—Levee District Number 5.....	32,680 00
Military purposes.....	98,143 53
Estates of deceased persons (counsel fees).....	679 60
Miscellaneous purposes.....	29,366 77
Total expenditures.....	\$3,785,111 35

STATEMENT

OF

Amount of Property Tax Collected for the State

IN THE

SEVERAL COUNTIES UNDER THE ASSESSMENT OF 1875-6 AND 1876-7.

STATEMENT No. 5.

Amount of property tax collected for the State in the several counties under the assessment of 1875-6, up to and including June 30th, 1877.

COUNTIES.	Property Tax 1875-6, Collected in 1875-6.	Property Tax 1875-6, Collected in 1876-7.	Total Property Tax 1875-6.
Alameda -----	\$218,270 33	\$643 88	\$218,914 21
Alpine -----	2,724 20	3 02	2,727 22
Amador -----	14,572 74	70 65	14,643 39
Butte -----	60,160 21	26 17	60,186 38
Calaveras -----	10,025 99	51 80	10,077 79
Colusa -----	60,138 76	772 14	60,910 90
Contra Costa -----	44,080 56	25 29	44,105 85
Del Norte -----	4,146 08	3 09	4,149 17
El Dorado -----	15,143 78	146 18	15,289 96
Fresno -----	42,926 22	913 32	43,839 54
Humboldt -----	28,876 02		28,876 02
Inyo -----	8,270 95	131 93	8,402 88
Kern -----	26,169 41	310 88	26,480 29
Lake -----	12,408 94	89 57	12,498 51
Lassen -----	6,906 38	5 93	6,912 31
Los Angeles -----	77,907 30		77,907 30
Marin -----	46,381 45	5 51	46,386 96
Mariposa -----	8,057 96	292 46	8,350 42
Mendocino -----	35,240 07	15 73	35,255 80
Merced -----	38,633 55	881 18	39,514 73
Modoc -----	5,997 78	52 42	6,050 20
Mono -----	3,523 51	43 55	3,567 06
Monterey -----	54,371 67	36 90	54,408 57
Napa -----	46,308 98	347 69	46,656 67
Nevada -----	45,952 72	34 32	45,987 04
Placer -----	41,454 37	30 74	41,485 11
Plumas -----	9,541 17	703 93	10,245 10
Sacramento -----	115,073 71	271 94	115,345 65
San Benito -----	27,850 45	7 15	27,857 60
San Bernardino -----	11,671 51	20 99	11,692 50
San Diego -----	18,146 79	105 35	18,252 14
San Francisco -----	1,264,893 05	39,498 23	1,304,391 28
San Joaquin -----	117,901 57		117,901 57
San Luis Obispo -----	30,316 15	362 15	30,678 30
San Mateo -----	37,595 66		37,595 66
Santa Barbara -----	37,319 85	51 90	37,371 75
Santa Clara -----	177,640 09	74 04	177,714 13
Santa Cruz -----	43,667 53	259 64	43,927 17
Shasta -----	11,265 88	279 09	11,544 97
Sierra -----	13,144 80		13,144 80
Siskiyou -----	19,246 18		19,246 18
Solano -----	57,510 58	178 79	57,689 37
Sonoma -----	94,825 91	1,346 58	96,172 49
Stanislaus -----	42,546 23	393 73	42,939 96
Sutter -----	26,892 74	58 99	26,951 73
Tehama -----	22,475 36		22,475 36
Trinity -----	5,235 09	237 69	5,472 78
Tulare -----	30,187 77	18 83	30,206 60
Tuolumne -----	8,056 68		8,056 68
Ventura -----	18,390 48	8 01	18,398 49
Yolo -----	54,599 18	2 77	54,601 95
Yuba -----	29,476 28	69 39	29,545 67
Totals -----	\$3,284,120 62	\$48,883 54	\$3,333,004 16

STATEMENT No. 6.

Amount of property tax collected for the State in the several counties under assessment of 1876-7, up to and including June 30th, 1877.

COUNTIES.	Amount collected.
Alameda.....	\$265,245 28
Alpine.....	2,753 93
Amador.....	18,427 64
Butte.....	72,339 90
Calaveras.....	13,065 56
Colusa.....	71,847 49
Contra Costa.....	52,336 23
Del Norte.....	4,715 17
El Dorado.....	16,765 39
Fresno.....	54,247 52
Humboldt.....	33,958 46
Inyo.....	12,795 23
Kern.....	41,560 91
Lake.....	15,153 81
Lassen.....	7,431 81
Los Angeles.....	107,434 97
Marin.....	56,765 12
Mariposa.....	10,236 29
Mendocino.....	42,198 37
Merced.....	42,488 90
Moloc.....	7,228 62
Mono.....	3,813 15
Monterey.....	52,607 88
Napa.....	59,265 13
Nevada.....	50,972 34
Placer.....	41,952 70
Plumas.....	13,805 90
Sacramento.....	129,417 34
San Benito.....	31,776 21
San Bernardino.....	18,903 93
San Diego.....	22,297 06
San Francisco.....	1,711,088 81
San Joaquin.....	129,984 59
San Luis Obispo.....	38,886 33
San Mateo.....	46,956 19
Santa Barbara.....	43,387 09
Santa Clara.....	205,979 57
Santa Cruz.....	47,752 52
Shasta.....	13,480 91
Sierra.....	12,744 55
Siskiyou.....	18,968 40
Solano.....	68,690 40
Sonoma.....	110,853 41
Stanislaus.....	42,850 37
Sutter.....	29,563 47
Tehama.....	26,533 33
Trinity.....	5,935 17
Tulare.....	33,397 09
Tuolumne.....	12,464 17
Ventura.....	25,140 94
Yolo.....	74,928 92
Yuba.....	32,489 85
Total.....	\$4,105,884 32

STATEMENT

OF

AMOUNTS OF STATE TAX DUE FROM COUNTIES, AMOUNTS
COLLECTED, AND AMOUNTS DELINQUENT,

FOR

ASSESSMENT OF PROPERTY TAX OF 1875-6 AND 1876-7.

STATEMENT No. 7.

Amounts of State tax due from counties, amounts collected, and amounts delinquent, for and on account of assessment of property tax of 1875-6, on the 30th day of June, 1877.

COUNTIES.	Amounts Due.	Amounts Collected.	Amounts Delinquent.
Alameda	\$234,992 44	\$218,914 21	\$16,078 23
Alpine	3,036 32	2,727 22	309 10
Amador	15,542 10	14,643 39	898 71
Butte	61,017 12	60,186 38	830 74
Calaveras	10,393 28	10,077 79	315 49
Colusa	62,059 38	60,910 90	1,148 48
Contra Costa	44,578 29	44,105 85	472 44
Del Norte	4,169 00	4,149 17	19 83
El Dorado	15,436 73	15,289 96	146 77
Fresno	46,061 97	43,839 54	2,222 43
Humboldt	29,610 58	28,876 02	734 56
Inyo	9,226 43	8,402 88	823 55
Kern	30,081 66	26,480 29	3,601 37
Lake	13,016 10	12,498 51	517 59
Lassen	7,179 46	6,912 31	267 15
Los Angeles	90,089 12	77,907 30	12,181 82
Marin	46,430 83	46,386 96	43 87
Mariposa	8,754 29	8,350 42	403 87
Meudocino	37,288 90	35,255 80	2,033 10
Merced	39,516 01	39,514 73	1 28
Modoc	6,547 44	6,050 20	497 24
Mono	3,678 95	3,567 06	111 89
Monterey	56,941 70	54,408 57	2,533 13
Napa	48,454 23	46,656 67	1,797 56
Nevada	47,755 95	45,987 04	1,768 91
Placer	41,721 58	41,485 11	236 47
Plumas	10,502 68	10,245 10	257 58
Sacramento	118,063 70	115,345 65	2,718 05
San Benito	28,072 90	27,857 60	215 30
San Bernardino	13,624 12	11,692 50	1,931 62
San Diego	18,633 81	18,252 14	381 67
San Francisco	1,627,925 55	1,304,391 28	323,534 27
San Joaquin	125,206 11	117,901 57	7,304 54
San Luis Obispo	32,437 57	30,678 30	1,759 27
*San Mateo	37,313 95	37,595 66	
Santa Barbara	40,879 10	37,371 75	3,507 35
*Santa Clara	177,644 00	177,714 13	
Santa Cruz	45,304 32	43,927 17	1,377 15
Shasta	11,694 50	11,544 97	149 53
Sierra	13,519 78	13,144 80	374 98
Siskiyou	19,497 61	19,246 18	251 43
Solano	59,012 21	57,689 37	1,322 84
Sonoma	100,186 39	96,172 49	4,013 90
Stanislaus	44,990 64	42,939 96	2,050 68
Sutter	27,183 45	26,951 73	231 72
Tehama	23,415 33	22,475 36	939 97
Trinity	5,696 88	5,472 78	224 10
Tulare	30,965 85	30,206 60	759 25
Tuolumne	8,372 39	8,056 68	315 71
Ventura	19,152 45	18,398 49	753 96
Yolo	56,434 99	54,601 95	1,833 04
Yuba	29,783 85	29,545 67	238 18
Totals	\$3,739,093 99	\$3,333,004 16	\$406,441 67

*The above statement shows that the counties of San Mateo and Santa Clara have each collected more property tax of the year eighteen hundred and seventy-five and six, than was originally due. This is hardly probable, and I account for the error by assuming that the property tax of some year other than eighteen hundred and seventy-five and six has been reported as the property tax of that year.

STATEMENT No. 8.

Amounts of State taxes due from counties, amounts collected, and amounts delinquent for and on account of assessment of property tax for the year 1876-7, on the 30th day of June, 1877.

COUNTIES.	Amounts Due.	Amounts Collected.	Amounts Delinquent.
Alameda	\$267,466 21	\$265,245 28	\$2,220 93
Alpine	3,330 36	2,753 93	576 43
Amador	18,936 59	18,427 64	508 95
Butte	72,868 31	72,339 90	528 41
Calaveras	14,025 39	13,065 56	959 83
Colusa	72,749 86	71,847 49	902 37
Contra Costa	53,125 21	52,336 23	788 98
Del Norte	4,791 28	4,715 17	76 11
El Dorado	17,181 82	16,765 39	416 43
Fresno	58,986 55	54,247 52	4,739 03
Humboldt	36,468 18	33,958 46	2,509 72
Inyo	15,388 15	12,795 23	2,592 92
Kern	46,086 87	41,560 91	4,525 96
Lake	15,779 21	15,153 81	625 40
Lassen	8,151 21	7,431 81	719 40
Los Angeles	108,984 47	107,434 97	1,549 50
Marin	57,258 68	56,765 12	493 56
Mariposa	10,770 83	10,236 29	534 54
Mendocino	43,356 28	42,198 37	1,157 91
Merced	45,131 05	42,488 90	2,642 15
Modoc	7,966 88	7,228 62	738 26
Mono	4,141 11	3,813 15	327 96
Monterey	64,667 77	52,607 88	12,059 89
Napa	59,647 28	59,265 13	382 15
Nevada	51,426 82	50,972 34	454 48
Placer	42,354 89	41,952 70	402 19
Plumas	14,559 44	13,805 90	753 54
Sacramento	131,699 44	129,417 34	2,282 10
San Benito	32,010 27	31,776 21	234 06
San Bernardino	20,054 32	18,903 93	1,150 39
San Diego	22,489 81	22,297 06	192 75
San Francisco	1,915,240 79	1,711,088 81	204,151 98
San Joaquin	131,411 58	129,984 59	1,426 99
San Luis Obispo	39,279 58	38,886 33	393 25
San Mateo	47,144 07	46,956 19	187 88
Santa Barbara	44,750 60	43,387 09	1,363 51
Santa Clara	207,088 22	205,979 57	1,108 65
Santa Cruz	48,854 53	47,752 52	1,102 01
Shasta	13,712 27	13,480 91	231 36
Sierra	13,169 32	12,744 55	424 77
Siskiyou	19,256 13	18,968 40	287 73
Solano	69,786 80	68,690 40	1,096 40
Sonoma	112,038 87	110,853 41	1,185 46
Stanislaus	44,038 30	42,850 37	1,187 93
Sutter	29,727 67	29,563 47	164 20
Tehama	26,914 93	26,533 33	381 60
Trinity	6,105 88	5,935 17	170 71
Tulare	34,967 93	33,397 09	1,570 84
Tuolumne	13,074 95	12,464 17	610 78
Ventura	25,665 16	25,140 94	524 22
Yolo	75,286 60	74,928 92	357 68
Yuba	32,650 50	32,489 85	160 65
Totals	\$4,372,019 22	\$4,105,884 32	\$266,134 90



BALANCE SHEET

SHOWING

THE CONDITION OF THE SEVERAL FUNDS.

STATEMENT No. 9.

Showing the condition of the several funds for the twenty-seventh and twenty-eighth fiscal years.

Dr.	GENERAL FUND.		Cr.
Sept. 30, 1875—To payment of canceled warrants	\$40 82	July 1, 1875—By balance	\$39,548 28
April 20, 1876—To transfer to Folsom Branch State Prison Fund	85,494 73	April 20, 1876—By transfer from Folsom Branch State Prison Fund	85,494 73
June 30, 1876—To warrants issued	2,048,177 65	June 30, 1876—By receipts	1,696,213 82
		June 30, 1876—By balance	312,456 37
	\$2,133,713 20		\$2,133,713 20
July 1, 1876—To balance	\$312,456 37	July 14, 1876—By warrants canceled	\$179 50
Feb. 17, 1877—To transfer to Swamp Land Fund	47,423 24	June 30, 1877—By receipts	2,363,713 77
March 7, 1877—To transfer to Folsom Branch State Prison Fund	85,494 73		
June 30, 1877—To warrants issued	1,587,630 19		
June 30, 1877—To balance	330,388 74		
	\$2,363,893 27	July 1, 1877—By balance	\$330,388 74

Dr.

SCHOOL FUND.

Cr.

July 8, 1875—To "California Teacher"	\$3,892 50	July 1, 1875—By balance	\$162,948 15
June 30, 1876—To warrants issued to County Treasurers	1,282,544 74	July 2, 1875—By interest on bonds	52,005 00
June 30, 1876—To balance	215,108 36	Nov. 22, 1875—By Regents State University	245 70
		Jan. 10, 1876—By interest on bonds	53,880 00
		June 30, 1876—By receipts from counties	1,232,466 75
	\$1,501,545 60		\$1,501,545 60
June 30, 1877—To warrants issued to County Treasurers	\$1,499,098 14	July 1, 1876—By balance	\$215,108 36
June 30, 1877—To balance	220,049 95	May 14, 1877—By Regents State University	133 60
		June 30, 1877—By interest on bonds { State—\$107,760 00	113,063 91
		June 30, 1877—By receipts from counties { County—5,303 91	1,390,842 22
	\$1,719,148 09		\$1,719,148 09
		July 1, 1877—By balance	\$250,049 95

Dr.

INTEREST AND SINKING FUND.

Cr.

June 30, 1876—To warrants issued for redemption of bonds	\$259,032 18	July 1, 1875—By balance	\$150,933 44
June 30, 1876—To warrants issued for interest on bonds	222,882 50	Nov. 30, 1875—By money returned by F. Baehr, excess in coupon account	245 00
June 30, 1876—To balance	239,487 72	June 30, 1876—By receipts from counties	340,223 96
	\$791,402 40		\$791,402 40
June 30, 1877—To warrants issued for redemption of bonds	\$7,613 67	July 1, 1876—By balance	\$239,487 72
June 30, 1877—To warrants issued for interest on bonds	314,745 00	Sept. 29, 1876—By J. G. Estudillo, State Treasurer	105 00
June 30, 1877—To balance	249,311 07	June 30, 1877—By receipts from counties	332,077 02
	\$571,669 74		\$571,669 74
		July 1, 1877—By balance	\$249,311 07

Dr.

STATE SCHOOL LAND FUND.

Cr.

June 30, 1876—To warrants issued		July 1, 1875—By balance		\$30,644 80
June 30, 1876—To balance	\$7,551 12 124,314 93	June 30, 1876—By receipts from counties		101,221 25
	\$131,866 05			\$131,866 05
June 30, 1877—To warrants issued	\$150,137 99	July 1, 1876—By balance		\$124,314 93
June 30, 1877—To balance	68,064 16	July 14, 1876—By warrants canceled		55 68
		April 23, 1877—By W. J. Curtis, money refunded		17 00
		June 30, 1877—By receipts from counties		93,814 54
	\$218,202 15			\$218,202 15
		July 1, 1877—By balance		\$68,064 16

Dr.

STATE CAPITOL FUND.

Cr.

June 30, 1876—To warrants issued		July 1, 1875—By balance		\$7,493 42
June 30, 1876—To balance	\$8,391 64 1,088 90	Nov. 18, 1875—By warrant canceled		1 50
		Nov. 27, 1875—By Capitol Commissioners' sale of old material		77 50
		Feb. 10, 1876—By Capitol Commissioners' sale of old material		137 25
		June 30, 1876—By receipts from counties		1,770 87
	\$9,480 54			\$9,480 54
June 30, 1877—To warrants issued	\$1,986 85	July 1, 1876—By balance		\$1,088 90
June 30, 1877—To balance	267 10	Aug. 3, 1876—By Capitol Commissioners' rent of Capitol grounds		251 00
		June 30, 1877—By receipts from counties		914 05
	\$2,253 95			\$2,253 95
		July 1—By balance		\$267 10

Dr.

STATE CAPITOL SPECIAL FUND OF 1872.

Cr.

Nov. 3, 1875—To warrant issued -----	\$5 25	July 1, 1875—By balance -----	\$5 25
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Dr.

STATE NORMAL SCHOOL BUILDING FUND.

Cr.

June 30, 1875—To balance -----	\$10 24	July 1, 1875—By balance -----	\$10 24
	\$10 24		\$10 24
June 30, 1876—To balance -----	\$10 24	July 1, 1876—By balance -----	\$10 24
	\$10 24		\$10 24
		July 1, 1877—By balance -----	\$10 24

Dr.

MILITARY FUND.

Cr.

June 30, 1876—To warrants issued -----	\$978 77	July 1, 1875—By balance -----	\$471 14
		June 30, 1876—By receipts from counties -----	507 63
	\$978 77		\$978 77
June 30, 1877—To balance -----	\$109 37	June 30, 1877—By receipts from counties -----	\$109 37
	\$109 37		\$109 37
		July 1, 1877—By balance -----	\$109 37

UNIVERSITY FUND.

Dr.

Cr.

June 30, 1876—To warrants issued -----		July 1, 1875—By balance -----	\$250 88
June 30, 1876—To balance -----	\$50,290 88	June 30, 1876—By interest on bonds -----	50,040 00
	356 40	June 30, 1876—By receipts from Tehama County -----	356 40
	<u>\$50,647 28</u>		<u>\$50,040 00</u>
June 30—To warrants issued -----	\$50,040 00	July 1, 1876—By balance -----	\$356 40
June 30—To balance -----	577 27	June 30, 1877—By receipts from Tehama County -----	220 87
		June 30, 1877—By interest on bonds -----	50,040 00
	<u>\$50,617 27</u>		<u>\$50,617 27</u>
		July 1, 1877—By balance -----	\$577 27

Dr.

UNIVERSITY ENDOWMENT FUND.

Cr.

June 30, 1877—To balance -----	\$627 20	January 29, 1877—By Siskiyou County -----	\$627 20
	<u>\$627 20</u>		<u>\$627 20</u>
		July 1, 1877—By balance -----	\$627 20

Dr.

STATE LIBRARY FUND.

Cr.

June 30, 1876—To warrants issued		July 1, 1875—By balance	
June 30, 1876—To balance	\$14,020 17	June 30, 1876—By fees from office of Secretary of State	\$13,948 86
	14,684 31	June 30, 1876—By fees from office of Surveyor-General	11,773 05
			2,982 57
			\$28,704 48
June 30, 1877—To warrants issued	\$28,704 48		
June 30, 1877—To balance	\$25,733 33	July 1, 1876—By balance	\$14,684 31
	1,341 08	June 30, 1877—By fees from office of Secretary of State	12,390 10
			\$27,074 41
	\$27,074 41	July 1, 1877—To balance	\$1,341 08

Dr.

SUPREME COURT LIBRARY FUND.

Cr.

June 30, 1876—To warrants issued		July 1, 1875—By balance	
June 30, 1876—To balance	\$1,260 00	June 30, 1876—By fees from office of Clerk Supreme Court	\$2,735 20
	3,242 40		1,767 20
			\$4,502 40
June 30, 1877—To warrants issued	\$1,806 05		
June 30, 1877—To balance	3,127 40	July 1, 1876—By balance	\$3,212 40
		June 30, 1877—By fees from office of Clerk Supreme Court	1,691 05
			\$4,933 45
	\$4,933 45	July 1, 1877—By balance	\$3,127 40

HARBOR PROTECTION FUND.

Dr.

Cr.

April 14, 1876—To transfer to San Francisco Harbor Improvement Fund-----	\$3,309 95	July 1, 1875—By balance-----	\$3,309 95
	\$3,309 95		\$3,309 95

WHARF AND DOCK FUND.

Dr.

Cr.

March 9, 1876—To warrants issued-----	\$131,661 44	July 1, 1875—By balance-----	\$160,069 68
March 9, 1876—To transfer to San Francisco Harbor Improvement Fund-----	221,179 74	June 30, 1876—By receipts from State Harbor Commissioners-----	192,771 50
	\$352,841 18		\$352,841 18

SAN FRANCISCO HARBOR IMPROVEMENT FUND.

Dr.

Cr.

June 30, 1876—To warrants issued-----	\$15,055 23	March 9, 1876—By transfer from Wharf and Dock Fund-----	\$221,179 74
June 30, 1876—To balance-----	269,985 59	April 14, 1876—By transfer from Harbor Improvement Fund-----	3,309 94
	\$285,040 82	June 30, 1876—By receipts from State Harbor Commissioners-----	60,551 13
	\$285,040 82		\$285,040 82
June 30, 1877—To warrants issued-----	\$258,661 87	July 1, 1876—By balance-----	\$269,985 59
June 30, 1877—To balance-----	317,226 81	June 30, 1877—By receipts from State Harbor Commissioners-----	305,903 09
	\$575,888 68		\$575,888 68
		July 1, 1877—By balance-----	\$317,226 81

Dr.

WAR BOND FUND.

Cr.

June 30, 1876—To warrant issued	\$77 31	July 1, 1875—By balance	\$8,814 65
June 30, 1876—To balance	8,737 34		
	\$8,814 65		\$8,814 65
June 30, 1877—To warrants issued	\$141 58	July 1, 1876—By balance	\$8,737 34
June 30, 1877—To balance	8,595 76		
	\$8,737 34	July 1, 1877—By balance	\$8,737 74
			\$8,595 76

Dr.

ESTATES OF DECEASED PERSONS' FUND.

Cr.

November 6, 1875—To warrant issued to James Hill, heir of Robert Hill, deceased	\$141 05	July 1, 1875—By balance	\$7,255 52
June 30, 1876—To balance	7,731 14	June 30, 1876—By receipts from counties	616 67
	\$7,872 19		\$7,872 19
June 30, 1877—To warrants issued (counsel fees)	\$679 60	July 1, 1877—By balance	\$7,731 14
June 30, 1877—To balance	15,254 84	June 30, 1877—By receipts from counties and administrators	8,203 30
	\$15,934 44		\$15,934 44
		July 1, 1877—By balance	\$15,254 84

Dr.

ELECTION REWARD FUND.

Cr.

Nov. 3, 1875—To warrant issued-----	\$100 00	July 1, 1875—By balance-----	\$620 37
June 30, 1876—To balance-----	1,142 35	June 30, 1876—By percentage on ballot paper sold-----	621 98
	<u>\$1,242 35</u>		<u>\$1,242 35</u>
June 30, 1877—To balance-----	\$1,201 21	July 1, 1876—By balance-----	\$1,142 35
	<u>\$1,201 21</u>	June 30, 1877—By percentage on ballot paper sold-----	58 86
			<u>\$1,201 21</u>
		July 1, 1877—By balance-----	<u>\$1,201 21</u>

Dr.

INSANE ASYLUM SPECIAL FUND.

Cr.

June 30, 1876—To balance-----	\$24,474 25	July 1, 1875—By balance-----	\$24,474 25
	<u>\$24,474 25</u>		<u>\$24,474 25</u>
June 30, 1877—To balance-----	\$24,474 25	July 1, 1876—By balance-----	\$24,474 25
	<u>\$24,474 25</u>		<u>\$24,474 25</u>
		July 1, 1877—By balance-----	<u>\$24,474 25</u>

FOLSOM BRANCH STATE PRISON FUND.

Dr.

Cr.

April 20, 1876—To transfer to General Fund.....	\$85,494 73	April 20, 1876—By transfer from General Fund.....	\$85,494 73
	\$85,494 73		\$85,494 73
June 30, 1877—To balance	\$85,494 73	March 7, 1877—By transfer from General Fund.....	\$85,494 73
	\$85,494 73		\$85,494 73
		July 1, 1877—By balance.....	\$85,494 73

INTEREST AND SINKING FUND—LEVEE DISTRICT No. 5.

Dr.

Cr.

January 28, 1876—To warrant issued to pay interest on bonds.....	\$1,160 00	July 1, 1875—By balance	\$1 02
June 30, 1876—To balance	18 96	January 26, 1876—By receipts from Sutter County.....	1,177 94
	\$1,178 96		\$1,178 96
June 30, 1877—To warrants issued to pay interest on bonds.....	\$32,680 00	July 1, 1876—By balance	\$18 96
June 30, 1877—To balance	15 65	June 30, 1877—By receipts from Sutter County.....	32,676 69
	\$32,695 65		\$32,695 65
		July 1, 1877—By balance.....	\$15 65

STATEMENT

OF THE

CONDITION OF ESTATES OF DECEASED PERSONS.

STATEMENT No. 10.

STATE OF CALIFORNIA IN ACCOUNT WITH ESTATES OF DECEASED PERSONS.

Dr.

Showing the amounts paid into the State treasury by County Treasurers and Administrators from estates of deceased persons. Also the amounts paid to the heirs by the State Treasurer according to law.

Date.	ESTATE OF—	From Whom Received.	Fund.	Amount.
August 3, 1853.	W. W. Scott.	I. N. Randolf, Sonoma County.	General.	\$4,240 31
April 25, 1854.		Treasurer San Joaquin County.	General.	24 12
May 3, 1854.	George Brock.	Treasurer Contra Costa County.	General.	22 31
March 25, 1854.	P. Kearney.	F. W. Shattuck.	Estate Deceased Persons.	89 09
Feb. 1, 1856.	E. H. Martin.	Treasurer Butte County.	General.	216 61
Feb. 1, 1856.	Wm. Hammond.	Treasurer Butte County.	General.	46 56
May 26, 1857.	Hiram Smith.	Treasurer Stanislaus County.	General.	8 75
May 22, 1857.	Nicolas Bado.	Israel Brockman.	General.	3,119 29
Jan. 12, 1859.	James Kelly.	Treasurer Stanislaus County.	General.	49 59
April 21, 1859.	T. J. Van Dusen.	Treasurer Tuolumne County.	General.	202 91
April 21, 1859.	F. Leptard.	Treasurer Tuolumne County.	General.	6 19
July 21, 1859.	T. J. Poole.	Treasurer Tuolumne County.	General.	76 43
July 21, 1859.	Samuel Collins.	Treasurer Tuolumne County.	General.	103 79
July 21, 1859.	John Carline.	Treasurer Tuolumne County.	General.	61 11
Oct. 28, 1859.	Abraham de Leent.	Treasurer Tuolumne County.	General.	41 40
Oct. 28, 1859.		Treasurer Calaveras County.	General.	2,256 67
Nov. 22, 1860.	H. Menard.	Treasurer Calaveras County.	General.	6 06
Feb. 25, 1861.	Robert Dickerson.	Treasurer El Dorado County.	General.	97
May 21, 1862.	— Wood.	Treasurer Yolo County.	Estate Deceased Persons.	2 04
Nov. 22, 1862.	M. Garea.	Treasurer Alameda County.	Estate Deceased Persons.	9 80
May 20, 1863.	M. Harris.	Treasurer Tehama County.	Estate Deceased Persons.	75 76
Nov. 23, 1863.	F. B. Gage.	(U. S. legal tenders,) Treasurer Humboldt County.	Estate Deceased Persons.	3 44
Nov. 23, 1863.	Daniel Peasley.	Treasurer San Bernardino County.	Estate Deceased Persons.	27 33
May 11, 1864.	F. P. Wierfleicki.	W. J. Challe.	Estate Deceased Persons.	568 99
May 21, 1864.	Ethan White or Wait.	Treasurer San Francisco County.	Estate Deceased Persons.	226 01
June 23, 1864.		(U. S. legal tenders,) Treasurer Humboldt County.	Estate Deceased Persons.	52 00
Nov. 11, 1864.			Estate Deceased Persons.	224 14
Nov. 15, 1864.			Estate Deceased Persons.	1,130 81

Nov. 28, 1865	R. Graves	Treasurer Humboldt County	Estate Deceased Persons	8 97
Nov. 28, 1865	J. Spivanes	Treasurer Humboldt County	Estate Deceased Persons	131 90
Jan. 9, 1866	C. W. Reed	Treasurer Sutter County	Estate Deceased Persons	57 40
Jan. 16, 1866		Treasurer Tulare County	Estate Deceased Persons	150 18
Feb. 5, 1866	Wm. Cullier or Collier	Jas. R. Fennel	Estate Deceased Persons	600 00
March 6, 1866	James Adamson	(U. S. legal tenders \$100 00.) Treasurer Santa Clara County	Estate Deceased Persons	300 80
March 6, 1866	Laurence Reiff	(U. S. legal tenders \$95 00.) Treasurer Santa Clara County	Estate Deceased Persons	190 60
March 8, 1866	Samuel Fellows	Treasurer Yolo County	Estate Deceased Persons	118 34
March 8, 1866	Chas. Urquhart	Treasurer Yolo County	Estate Deceased Persons	8 49
July 13, 1867	Francis Steele	Treasurer San Diego County	Estate Deceased Persons	2,025 42
Oct. 3, 1867	John Sprat	Treasurer Yolo County	Estate Deceased Persons	6 30
Jan. 10, 1868	Nelson Woodcock	Treasurer Shasta County	Estate Deceased Persons	1,200 97
Jan. 9, 1868	Dominick Carroll	Treasurer Shasta County	Estate Deceased Persons	437 11
July 9, 1868	William Burbridge	Treasurer Shasta County	Estate Deceased Persons	64 02
July 10, 1868	J. Whitford	Treasurer Lassen County	Estate Deceased Persons	75 32
July 25, 1868	Andrews Katz	J. L. Ord	Estate Deceased Persons	349 69
Nov. 20, 1868	W. C. Kingston	Treasurer Shasta County	Estate Deceased Persons	385 37
May 17, 1869	Wreck of steamer Bro. Johathan	Treasurer Del Norte County	Estate Deceased Persons	77 43
Jan. 6, 1870	Henry Payne	Treasurer Klamath County	Estate Deceased Persons	262 38
Jan. 6, 1870	Thomas Welch	Treasurer Sutter County	Estate Deceased Persons	12 70
Jan. 6, 1870	Isaiah Williams	Treasurer Sutter County	Estate Deceased Persons	7 49
Feb. 8, 1871	F. Johnson	Treasurer San Diego County	Estate Deceased Persons	195 76
July 5, 1871	Roulon	Treasurer Marin County	Estate Deceased Persons	289 50
July 11, 1871	F. H. Mart, or Mast	Treasurer Sonoma County	Estate Deceased Persons	45 84
July 13, 1871	James Turner	Treasurer Yuba County	Estate Deceased Persons	99 91
Jan. 19, 1872	Edward Stacey	Treasurer San Bernardino County	Estate Deceased Persons	396 20
Jan. 19, 1874	Robert Hill	Treasurer Shasta County	Estate Deceased Persons	96 15
Jan. 19, 1874	Anton Claumbrun	Treasurer Shasta County	Estate Deceased Persons	45 84
April 9, 1874	N. H. Steiner	Treasurer Shasta County	Estate Deceased Persons	141 05
June 18, 1874	John L. Schmidt	Treasurer Siskiyou County	Estate Deceased Persons	361 58
June 24, 1874	Joseph Murray	Treasurer Ventura County	Estate Deceased Persons	40 50
Jan. 20, 1875	S. G. Sherry	Treasurer San Bernardino County	Estate Deceased Persons	122 16
Jan. 20, 1875	Thomas Carrigan	Treasurer El Dorado County	Estate Deceased Persons	225 53
June 22, 1875	William Koppel	Treasurer Napa County	Estate Deceased Persons	124 16
June 22, 1875	Jack Jones	Treasurer Napa County	Estate Deceased Persons	17 45
Jan. 20, 1876	E. Comstock	Treasurer Merced County	Estate Deceased Persons	181 66
Jan. 20, 1876	Dominico Giurino	Treasurer Merced County	Estate Deceased Persons	239 47
Jan. 27, 1876	John Cannon	Treasurer San Joaquin County	Estate Deceased Persons	432 86
Jan. 27, 1876	Henry Zollinger	Treasurer Napa County	Estate Deceased Persons	24 20
June 23, 1876	John Smith	Treasurer Ventura County	Estate Deceased Persons	124 94
June 27, 1876	S. Mattiny	Treasurer San Luis Obispo County	Estate Deceased Persons	20 95
			Estate Deceased Persons	3 78
			Estate Deceased Persons	9 94

STATE OF CALIFORNIA IN ACCOUNT WITH ESTATES OF DECEASED PERSONS—Continued.

Dr.

Date.	ESTATE OF—	From Whom Received.	Fund.	Amount.
Oct. 20, 1876	T. Limpach	Treasurer Alameda County	Estate Deceased Persons	1,094 65
Oct. 21, 1876	Thomas R. Mahan	C. Hubert, Treasurer San Francisco County	Estate Deceased Persons	2,522 00
Oct. 21, 1876	J. H. Watkins	C. Hubert, Treasurer San Francisco County	Estate Deceased Persons	192 55
Oct. 21, 1876	P. Madden	C. Hubert, Treasurer San Francisco County	Estate Deceased Persons	106 70
Oct. 21, 1876	Louise Vollmer	C. Hubert, Treasurer San Francisco County	Estate Deceased Persons	263 90
Nov. 1, 1876	Henry Curtis	William K. Squires, Administrator Solano County	Estate Deceased Persons	1,063 29
Jan. 29, 1877	William Smith	Treasurer Yuba County	Estate Deceased Persons	34 92
Feb. 20, 1877	Cristoval Quijada	Treasurer San Luis Obispo County	Estate Deceased Persons	26 00
April 12, 1877	F. Vincent	Treasurer Alameda County	Estate Deceased Persons	138 56
March 22, 1877	Antonio Malazaigne	F. R. Dray, Ex Public Administrator, Sacramento County	Estate Deceased Persons	265 15
March 22, 1877	Friederick Allendorf	F. R. Dray, Ex Public Administrator, Sacramento County	Estate Deceased Persons	102 84
March 22, 1877	James Duffy	F. R. Dray, Ex Public Administrator, Sacramento County	Estate Deceased Persons	190 65
June 28, 1877	J. Bausch	Treasurer Napa County	Estate Deceased Persons	111 65
June 28, 1877	P. Shatwin	Treasurer Napa County	Estate Deceased Persons	1,999 69
June 29, 1877	Hough Phillips	Treasurer Los Angeles County	Estate Deceased Persons	86 50
June 29, 1877	T. Walters	Treasurer Los Angeles County	Estate Deceased Persons	4 25
<i>Escheated Estates.</i>				
Dec. 19, 1853	Joseph Waller	Treasurer Los Angeles County	School	\$1,014 79
July 19, 1856	J. L. Waters	Treasurer Butte County	General	1,115 50
August 25, 1857		Treasurer Humboldt County	General	57 55
July 22, 1858	P. Seilor, or Labor	Treasurer Sonoma County	General	774 31
Dec. 1, 1858	J. Davis	Treasurer San Francisco County	General	10 59
Dec. 1, 1858	Jacques Pissevain	Treasurer San Francisco County	General	391 05
Dec. 1, 1858	William Evans	Treasurer San Francisco County	General	126 93
Dec. 1, 1858	G. W. Richardson	Treasurer San Francisco County	General	33 75
Dec. 1, 1858	Fernand Schmidt	Treasurer San Francisco County	General	93 15
Dec. 1, 1858	P. Maurin	Treasurer San Francisco County	General	719 66
Dec. 1, 1858	W. H. Bayard	Treasurer San Francisco County	General	93
Dec. 1, 1858	John Bohler	Treasurer San Francisco County	General	38 80
Dec. 1, 1858	Jacob Unger	Treasurer San Francisco County	General	8 29
Dec. 1, 1858	C. H. Martin	Treasurer San Francisco County	General	13 31
Dec. 1, 1858	John Redmond	Treasurer San Francisco County	General	8 56
Dec. 1, 1858	G. Vignio	Treasurer San Francisco County	General	12 92

Dec, 1, 1858	Joseph Sanders	Treasurer San Francisco County	General	26 68
Dec, 1, 1858	McDonald	Treasurer San Francisco County	General	84
January 6, 1859	Thos. Batters, or Baltus	Treasurer Sonoma County	General	1,356 32
July 28, 1859		Treasurer Tulare County	General	32 84
February 4, 1860	I. M. Vandall	Treasurer Del Norte County	General	131 83
May 20, 1861		Treasurer Tulare County	General	45 11
Nov, 20, 1861		Treasurer Tulare County	General	68 87

N. B.—Neither the county nor State records furnish any information as to the names of estates which are left blank.

STATE OF CALIFORNIA IN ACCOUNT WITH ESTATES OF DECEASED PERSONS—Continued. Cr.

Date.	ESTATE OF—	To Whom Paid.	Fund.	Warrant No.	Amount.
Oct. 13, 1853-----	W. W. Scott-----	Mary W. Scott, infant heirs-----	-----	522	\$4,240 31
June 30, 1860-----	Hiram Smith-----	Heirs of Hiram Smith-----	-----	5121	3,119 29
July 29, 1862-----	Abraham de Lecur-----	J. P. H. Gildemeister, for legatees-----	General-----	63	2,286 67
June 18, 1867-----	Wm. Cuthler, or Collier-----	James Logan, agent for heirs-----	Estate Deceased Persons-----	10219	600 00
May 24, 1866-----	Samuel Fellows-----	Rufus and Augustus Fellows, heirs-----	Estate Deceased Persons-----	15764	118 34
March 6, 1869-----	Francis Steele-----	W. C. Steele, et als, heirs-----	Estate Deceased Persons-----	2330	2,023 00
Jan. 6, 1871-----	Dominick Carroll-----	C. Carroll, Catherine Sweeney, Bridget Killen- lin, Ann Gornon, heirs-----	Estate Deceased Persons-----	2092	349 69
Sept. 17, 1873-----	W. C. Kingston-----	Daniel Lynch, heir-----	Estate Deceased Persons-----	994	385 37
Nov. 6, 1875-----	Robert Hill-----	James Hill, heir-----	Estate Deceased Persons-----	1253	141 05
May 10, 1877-----	Thomas R. Mahan-----	A. W. Roysdon, attorney's fees-----	Estate Deceased Persons-----	2815	260 00
May 10, 1877-----	J. H. Watkins-----	A. W. Roysdon, attorney's fees-----	Estate Deceased Persons-----	2813	19 55
May 10, 1877-----	F. Madden-----	A. W. Roysdon, attorney's fees-----	Estate Deceased Persons-----	2812	11 00
May 10, 1877-----	Louise Vollmer-----	A. W. Roysdon, attorney's fees-----	Estate Deceased Persons-----	2814	27 20
May 10, 1877-----	Henry Curtis-----	Lamont and Wendell, attorney's fees, etc-----	Estate Deceased Persons-----	2816	306 00
March 22, 1877-----	Antonio Malazaigne-----	P. Dunlap, attorney's fees-----	Estate Deceased Persons-----	2326	26 50
March 22, 1877-----	Frederick Allendorf-----	P. Dunlap, attorney's fees-----	Estate Deceased Persons-----	2328	10 28
March 22, 1877-----	James Duffy-----	P. Dunlap, attorney's fees-----	Estate Deceased Persons-----	2327	19 06
<i>Escheated Estates.</i>					
Dec. 5, 1870-----	P. Scilor, or Lalor-----	Margaret Toppee and Catherine Welsh, heirs-----	Estate Deceased Persons-----	1615	\$774 31
May 8, 1860-----	P. Maurin-----	F. Gauthier, French Consul, for heirs-----	General-----	4761	719 66

FINANCIAL CONDITION
OF
THE SEVERAL COUNTIES OF THE STATE
FOR
THE YEARS 1875-6 AND 1876-7.

STATEMENT No. 11.

Financial condition of the several counties of this State for the year 1875-6.

COUNTIES.	Funded Debt.	Floating Debt.	Rates of Interest.	Value of Prop- erty owned by County.	Cash in hands of County Treasurer.
Alameda	\$247,944 00	\$112,743 64	7	\$488,000 00	\$50,175 04
Alpine	-----	22,311 13	6-7-10	4,000 00	2,675 35
Amador	-----	110,505 18	7-10	30,000 00	2,382 25
Butte	189,079 49	24,012 97	10	24,000 00	53,003 07
Calaveras	115,325 00	70,232 59	-----	20,000 00	3,082 00
Colusa	-----	53,270 64	7-10	30,000 00	33,840 15
Contra Costa	-----	58,929 00	7	25,000 00	32,971 20
Del Norte	-----	7,500 00	7	7,500 00	6,500 00
El Dorado	170,500 00	1,655 98	7-10	20,000 00	16,611 18
Fresno	53,500 00	13,607 00	7-10	71,000 00	-----
Humboldt	-----	68,242 26	7-9	9,000 00	53,431 64
Inyo	-----	92,212 06	10	40,000 00	5,325 16
Kern	-----	90,102 00	7	32,700 00	28,227 33
Lake	41,000 00	20,368 63	7-8-12	55,825 00	4,737 60
Lassen	14,281 88	-----	10	12,000 00	11,911 00
Los Angeles	-----	688,417 25	7-10	60,000 00	36,528 44
Marin	140,000 00	17,168 89	7-8-10	95,000 00	24,089 56
Mariposa	-----	62,099 70	7	17,500 00	6,098 44
Mendocino	123,263 64	34,139 96	7-10	53,000 00	-----
Merced	75,000 00	46,066 14	7-8-9-10	96,000 00	26,524 89
Modoc	13,618 51	2,700 16	7-10	1,236 00	5,329 41
Mono	-----	1,561 40	7-10	3,300 00	3,154 68
Monterey	-----	31,000 40	7	23,000 00	14,886 84
Napa	228,000 00	117,501 32	7-10	240,000 00	22,833 94
Nevada	-----	50,473 73	7	83,000 00	21,511 04
Placer	7,000 00	-----	8	19,000 00	20,595 93
Plumas	35,000 00	37,117 78	7-10	12,400 00	3,399 47
Sacramento	703,200 00	1,110 70	6-8	301,800 00	59,968 85
San Benito	11,000 00	10,093 62	7	14,600 00	4,724 18
San Bernardino	4,711 20	-----	7	46,250 00	10,294 77
San Diego	112,846 82	51,903 04	7-10	6,250 00	23,041 82

San Francisco	3,630,500 00	83,844 00	6-7	9,037,000 00	403,133 25
San Joaquin	237,902 00		8-10	158,000 00	85,949 62
San Luis Obispo	55,000 00		10	44,000 00	19,760 06
San Mateo	90,000 00		10	10,000 00	36,791 25
Santa Barbara	58,000 00	15,600 00	7	60,000 00	13,606 00
Santa Clara	376,000 00	160,136 56	7-8	356,000 00	13,074 62
Santo Cruz	108,000 00	7,660 00	7	88,578 00	52,347 27
Shasta		75,619 37	7	18,000 00	11,955 70
Sierra	21,100 00	12,031 66	10	9,000 00	7,736 28
Siskiyou	55,600 00		10	15,000 00	9,524 00
Solano	156,224 00		7-10	24,000 00	46,778 92
Sonoma	374,700 00	156,050 23	8	200,500 00	59,400 00
Stanislaus	42,000 00	8,324 22	7-9	59,000 00	16,330 28
Sutter	25,000 00	39,224 21	7-10	48,000 00	4,918 87
Tehama	62,853 61	28,410 34	7-10	29,000 00	11,510 33
Trinity		60,797 64	7-10	7,500 00	9,309 51
Tulare	3,000 00	49,994 48	7	27,000 00	23,331 09
Tuolumne		52,769 74	7	28,000 00	750 25
Ventura	20,000 00	2,229 65	10	19,000 00	8,254 69
Yolo		133,151 34	7	40,000 00	1,143 17
Yuba	224,000 00	7,934 81	7-8	65,000 00	24,169 56
Totals	\$7,827,150 15	\$2,790,824 81		\$12,283,939 00	\$1,450,199 95

FINANCIAL CONDITION OF COUNTIES FOR 1875-6—Continued.

COUNTIES.	Total Value of Property.	Rate of Taxation on each \$100.			Amount of State and County Taxes.
		State.	County.	Total.	
Alameda	\$39,333,702 00	60½	{ 44½ 69½ }	{ \$1 05 1 30 }	\$452,010 96
Alpine	501,870 00	60½	\$2 34½	2 95	14,805 19
Amador	2,568,943 00	60½	1 99½	2 60	66,792 51
Butte	10,085,476 00	60½	1 19½	1 80	181,538 55
Calaveras	1,717,897 00	60½	2 49½	3 10	53,254 81
Colusa	10,257,749 00	60½	99½	1 60	164,123 98
Contra Costa	7,347,128 00	60½	1 11½	1 72	126,734 97
Del Norte	689,090 00	60½	1 39½	2 00	13,781 80
El Dorado	2,548,926 00	60½	1 05	1 65½	42,227 77
Fresno	7,613,549 00	60½	74½	1 35	102,782 91
Humboldt	4,894,310 00	60½			107,674 82
Inyo	1,525,030 00	60½	2 39½	3 00	45,750 90
Kern	4,973,175 00	60½	1 65½	2 26	112,371 16
Lake	2,151,421 00	60½	1 49½	2 10	45,179 84
Lassen	1,186,689 00	60½	1 89½	2 50	29,667 22
Los Angeles	14,890,765 00	60½	1 37½	1 98	285,102 06
Marin	7,674,518 00	60½	79½	1 40	107,443 25
Mariposa	1,446,991 00	60½	2 24½	2 85	41,239 23
Mendocino	6,163,555 00	60½	1 24½	1 85	108,008 30
Merced	6,531,573 00	60½	1 07½	1 68	109,730 42
Modoc	1,082,222 00	60½	1 39½	2 00	21,644 44
Mono	608,097 00	60½	1 49½	2 10	12,770 00
Monterey	9,411,852 00	60½	64½	1 25	117,648 15
Napa	8,006,964 00	60½	1 39½	2 00	160,179 28
Nevada	7,889,702 00	60½	1 09½	1 70	134,190 29
Placer	6,896,129 00	60½	69½	1 30	89,649 68
Plumas	1,735,981 00	60½	2 19½	2 80	48,607 46
Sacramento	19,515,600 00	60½	69½	1 30	253,690 58
San Benito	4,640,150 00	60½	54½	1 15	53,361 72
San Bernardino	2,251,922 00	60½	1 79½	2 40	54,046 11
San Diego	3,079,969 00	60½	2 00	2 60½	76,854 61
San Francisco	268,532,859 00	60½	1 00	1 60½	4,318,711 61
San Joaquin	20,696,296 00	60½	64½	1 25	258,690 32
San Luis Obispo	5,322,784 00	60½	89½	1 50	80,423 72
San Mateo	6,167,596 00	60½	1 14½	1 75	107,932 92
Santa Barbara	6,756,877 00	60½	1 07½	1 68	113,515 53
Santa Clara	29,362,646 00	60½	69½	1 30	381,714 36
Santa Cruz	7,469,241 00	60½	84½	1 45	108,580 61
Shasta	1,933,296 00	60½	1 69½	2 30	44,461 26
Sierra	2,234,675 00	60½	1 75½	2 36	52,738 33
Siskiyou	3,222,894 00	60½	1 14½	1 75	56,297 93
Solano	9,754,085 00	60½	1 44½	2 05	205,026 20
Sonoma	16,559,733 00	60½	89½	1 50	248,396 00
Stanislaus	7,436,470 00	60½	79½	1 40	104,110 58
Sutter	4,492,445 00	60½	91½	1 52	68,295 62
Tehama	3,873,565 00	60½	1 34½	1 95	75,470 90
Trinity	941,533 00	60½	2 09½	2 70	25,424 09
Tulare	5,118,322 00	60½	1 05½	1 66	84,964 15
Tuolumne	1,383,864 00	60½	1 89½	2 50	34,596 66
Ventura	3,165,694 00	60½	1 09½	1 70	53,818 82
Yolo	9,328,099 00	60½	99½	1 60	149,249 51
Yuba	4,922,950 00	60½	{ 1 69½ 1 99½ }	{ 2 30 2 60 }	121,166 01
Totals	\$617,896,869 00	-----	-----	-----	\$9,926,638 10

STATEMENT No. 12.

Financial condition of the several counties of this State for the year 1876-7.

COUNTIES.	Funded Debt.	Floating Debt.	Rates of Interest.	Value of Property owned by County.	Cash in hands of County Treasurer.
Alameda	\$246,944 00	\$119,827 39	7-8-10	\$391,000 00	\$46,287 32
Alpine	-----	20,030 00	6-7-10	1,500 00	7,927 60
Anaconda	-----	99,089 40	7-10	30,000 00	5,742 01
Butte	167,310 00	10,102 88	10	37,500 00	39,856 92
Calaveras	108,350 00	69,800 00	7	20,000 00	3,518 92
Colusa	-----	44,312 00	7-10	30,000 00	52,673 00
Contra Costa	-----	70,175 13	7	33,000 00	22,772 56
Del Norte	-----	4,070 00	7	9,000 00	10,279 37
El Dorado	-----	180,362 40	7-10	20,000 00	9,719 94
Fresno	47,000 00	-----	7-10	76,020 00	16,595 29
Humboldt	-----	-----	-----	-----	-----
Inyo	34,000 00	63,499 07	7-10	55,000 00	6,262 50
Kern	65,000 00	29,854 01	7-10	45,500 00	33,726 80
Lake	-----	61,400 00	7-8-12	34,600 00	5,753 10
Lassen	24,821 82	-----	10	12,000 00	15,160 86
Los Angeles	-----	659,414 90	7-10	50,000 00	32,551 46
Marin	300,000 00	24,351 89	7-8-12	95,000 00	25,275 60
Mariposa	-----	39,906 00	7	21,000 00	4,819 98
Mendocino	138,263 64	22,306 43	7-8-12	53,150 00	32,054 09
Merced	75,000 00	55,700 05	7-10	80,800 00	14,004 12
Modoc	14,980 36	1,431 91	7-10	2,656 00	11,187 40
Mono	-----	2,363 31	7	3,300 00	6,421 55
Monterey	-----	29,547 92	7	17,000 00	12,578 90
Napa	228,000 00	99,284 96	7-10	240,000 00	29,170 78
Nevada	-----	59,081 84	7	83,000 00	15,553 47
Placer	4,000 00	-----	8	19,000 00	34,565 22
Plumas	58,850 00	23,738 59	7-10	15,000 00	11,980 06
Sacramento	695,200 00	-----	6-8	235,900 00	49,560 70
San Benito	11,000 00	11,727 48	-----	14,600 00	5,918 45
Amount carried forward	\$2,218,719 82	\$1,809,317 56	-----	\$1,727,506 00	\$561,917 97

FINANCIAL CONDITION OF COUNTIES FOR 1876-7—Continued.

COUNTIES.	Funded Debt.	Floating Debt.	Rates of Interest.	Value of Property owned by County.	Cash in hands of County Treasurer.
Amount brought forward					
San Bernardino	\$2,218,719 82	\$1,809,317 56	-----	\$1,727,506 00	\$561,917 97
San Diego	2,361 42	26,278 53	7-10	51,800 00	11,572 82
San Francisco	102,846 82	57,414 57	6-7	60,250 00	17,289 52
San Joaquin	4,322,500 00	-----	8-10	10,740,000 00	517,551 73
San Luis Obispo	117,000 00	230,300 00	8-10	158,000 00	81,263 87
San Mateo	146,000 00	25,791 53	8-10	50,000 00	34,409 42
Santa Barbara	5,500 00	-----	7-10	8,000 00	18,086 00
Santa Clara	376,000 00	70,000 00	10	75,000 00	17,564 06
Santa Cruz	208,300 00	218,963 07	7-8	356,000 00	13,345 92
Shasta	-----	44,140 00	8-10	79,000 00	39,466 00
Sierra	29,000 00	77,813 22	7	18,000 00	8,583 55
Siskiyou	55,600 00	10,642 50	-----	11,000 00	15,923 87
Solano	149,912 00	-----	10	17,500 00	24,298 62
Sonoma	374,700 00	139,916 77	7	25,500 00	7,901 39
Stanislaus	41,925 00	-----	7-8	234,000 00	47,558 30
Sutter	25,000 00	35,000 00	7-9	54,000 00	12,228 61
Tehama	67,000 00	41,928 52	7-10	51,500 00	34,042 41
Trinity	-----	64,069 33	7-8-10	29,000 00	16,003 94
Tulare	21,600 00	56,634 96	7-10	7,500 00	13,366 87
Tuolumne	-----	76,606 88	7-10	29,000 00	37,619 08
Ventura	20,000 00	47,484 70	7	28,000 00	96 61
Yolo	-----	1,388 58	7-10	20,000 00	13,156 57
Yuba	197,700 00	75,651 76	7	40,000 00	13,369 87
	-----	12,768 07	8	65,000 00	22,100 81
Totals	\$8,481,665 06	\$3,125,110 55	-----	\$13,935,556 00	\$1,579,317 81

FINANCIAL CONDITION OF COUNTIES FOR 1876-7—Continued.

COUNTIES.	Total Value of Property.	Rate of Taxation on each \$100.			Amount of State and County Taxes.
		State.	County.	Total.	
Alameda	\$36,389,961 00	73.5	{ 57½ 82½ }	{ \$1 31 1 56 }	\$520,511 07
Alpine	453,111 00	73.5	\$2 14½	2 88	13,049 36
Amador	2,576,408 00	73.5	1 96½	2 70	69,560 79
Butte	9,914,057 00	73.5	1 26½	2 00	198,281 14
Calaveras	1,908,216 00	73.5	2 36½	3 10	59,154 70
Colusa	9,897,941 00	73.5	1 06½	1 80	178,163 33
Contra Costa	7,227,920 00	73.5	1 10½	1 84	132,093 73
Del Norte	651,876 00	73.5	1 76½	2 50	16,297 42
El Dorado	2,337,663 00	73.5	1 60	2 33½	54,584 43
Fresno	8,025,381 00	73.5	96½	1 70	136,431 48
Humboldt	4,961,657 00	73.5	1 56½	2 30	114,118 11
Inyo	2,093,625 00	73.5	2 26½	3 00	62,808 75
Kern	6,270,323 00	73.5	1 67½	2 41	151,114 75
Lake	2,146,832 00	73.5	2 11½	2 85	61,184 70
Lassen	1,109,009 00	73.5	2 01½	2 75	30,497 75
Los Angeles	14,880,922 00	73.5	{ 1 01½ 1 16½ }	{ 1 75 1 90 }	274,461 81
Marin	7,790,297 00	73.5	96½	1 70	132,435 04
Mariposa	1,465,423 00	73.5	2 37½	3 11	45,574 65
Mendocino	5,898,813 00	73.5	1 39½	2 13	125,644 72
Merced	6,140,279 00	73.5	1 03½	1 77	108,682 93
Modoc	1,083,929 00	73.5	1 51½	2 25	24,388 40
Mono	563,419 00	73.5	1 51½	2 25	12,676 86
Monterey	8,798,337 00	73.5	76½	1 50	131,975 05
Napa	8,115,276 00	73.5	1 26½	2 00	166,802 52
Nevada	6,996,846 00	73.5	1 16½	1 90	132,940 07
Placer	5,762,570 00	73.5	76½	1 50	86,438 55
Plumas	1,980,877 00	73.5	1 81½	2 55	50,512 36
Sacramento	17,918,292 00	73.5	91½	1 65	295,651 98
San Benito	4,353,640 00	73.5	76½	1 50	65,248 25
San Bernardino	2,728,480 00	73.5	1 76½	2 50	68,374 30
San Diego	3,256,632 00	73.5	1 75	2 48½	76,036 99
San Francisco	260,576,978 00	73.5	1 39	2 12½	5,537,260 78
San Joaquin	17,879,127 00	73.5	76½	1 50	268,183 05
San Luis Obispo	5,330,339 00	73.5	1 01½	1 75	93,476 30
San Mateo	6,414,160 00	73.5	1 26½	2 00	128,283 20
Santa Barbara	6,088,518 00	73.5	1 11½	1 85	112,637 58
Santa Clara	28,175,269 00	73.5	91½	1 65	464,891 94
Santa Cruz	6,646,875 00	73.5	1 36½	2 10	139,584 37
Shasta	1,865,616 00	73.5	1 76½	2 50	46,638 93
Sierra	1,791,744 00	73.5	1 96½	2 70	48,377 11
Siskiyou	2,619,891 00	73.5	1 06½	1 80	47,157 88
Solano	9,494,804 00	73.5	1 56½	2 30	218,376 30
Sonoma	15,243,398 00	73.5	91½	1 65	251,516 06
Stanislaus	5,991,605 00	73.5	91½	1 65	98,861 48
Sutter	4,050,587 00	73.5	1 16½	1 90	76,847 04
Tehama	3,661,896 00	73.5	1 46½	2 20	80,561 70
Trinity	830,733 00	73.5	2 06½	2 80	23,260 52
Tulare	4,757,541 00	73.5	1 56½	2 30	109,423 45
Tuolumne	1,778,905 00	73.5	1 66½	2 40	42,693 72
Ventura	3,491,859 00	73.5	1 11½	1 85	64,599 41
Yolo	10,243,075 00	73.5	1 78	2 51½	182,526 74
Yuba	4,442,245 00	73.5	{ 1 76½ 2 06½ }	{ 2 50 2 80 }	118,416 97
Totals	\$595,073,177 00	-----	-----	-----	\$11,749,970 52

SAN FRANCISCO
PUBLIC LIBRARY

STATEMENT

OF

AMOUNTS CHARGED TAX COLLECTORS

1875-6 AND 1876-7.

STATEMENT No. 13.

Amounts charged Tax Collectors for the fiscal year 1875-6, and also the number of acres of land assessed for said year.

COUNTIES.	Number of Acres of Land	Value of Real Estate	Value of Personal Property	Total Value of Taxable Property	Amount of Tax for State Purposes	Amount of Tax for County Purposes	Total Amount of Tax charged Tax Collector
Alameda	424,881	\$32,168,903 00	\$6,672,822 00	\$38,841,725 00	\$234,992 44	\$217,018 52	\$452,010 96
Alpine	52,862	240,105 00	261,765 00	501,870 00	3,036 32	11,768 87	14,805 19
Amador	141,867	1,743,998 00	824,945 00	2,568,943 00	15,542 10	51,250 41	66,792 51
Butte	504,396	7,290,095 00	2,795,381 00	10,085,476 00	61,017 12	120,521 43	181,538 55
Calaveras	183,731	7,899,329 00	818,568 00	1,717,897 00	10,393 28	42,801 53	53,234 81
Colusa	1,049,262	7,294,060 00	2,963,689 00	10,257,749 00	62,039 38	102,064 60	164,123 98
Contra Costa	449,524	5,508,867 00	1,859,445 00	7,368,312 00	44,578 29	82,156 68	126,734 97
Del Norte	44,931	386,990 00	302,100 00	689,090 00	4,169 00	9,612 80	13,781 80
El Dorado	183,679	1,409,229 00	1,142,297 00	2,551,526 00	15,436 73	26,791 04	42,227 77
Fresno	1,692,171	4,870,603 00	2,742,946 00	7,613,549 00	46,061 97	56,720 94	102,782 91
Humboldt	893,171	2,744,828 00	2,149,482 00	4,894,310 00	29,610 58	78,064 24	107,674 82
Inyo	49,003	778,878 00	746,152 00	1,525,030 00	9,226 43	36,524 47	45,750 90
Kern	911,399	2,885,604 00	2,086,371 00	4,972,175 00	30,081 66	82,289 50	112,371 16
Lake	171,870	1,498,014 00	653,407 00	2,151,421 00	13,016 10	32,163 74	45,179 84
Lassen	123,383	483,657 00	703,032 00	1,186,689 00	7,179 46	22,487 76	29,667 22
Los Angeles	1,114,108	10,232,777 00	4,657,988 00	14,890,765 00	90,089 12	195,102 94	285,192 06
Marin	317,686	6,100,335 00	1,574,183 00	7,674,518 00	46,430 83	61,012 42	107,443 25
Mariposa	173,225	872,500 00	574,491 00	1,446,991 00	8,754 29	32,484 94	41,239 23
Mendocino	689,368	3,321,738 00	2,841,717 00	6,163,455 00	37,288 90	70,719 40	108,008 30
Merced	1,040,810	4,681,635 00	1,849,938 00	6,531,573 00	39,516 01	70,214 41	109,730 42
Modoc	100,032	409,967 00	672,255 00	1,082,222 00	6,547 44	15,097 00	21,644 44
Mono	39,288	182,087 00	426,010 00	608,097 00	3,678 95	9,091 05	12,770 00
Monterey	776,504	7,023,094 00	2,388,758 00	9,411,852 00	56,941 70	60,706 45	117,648 15

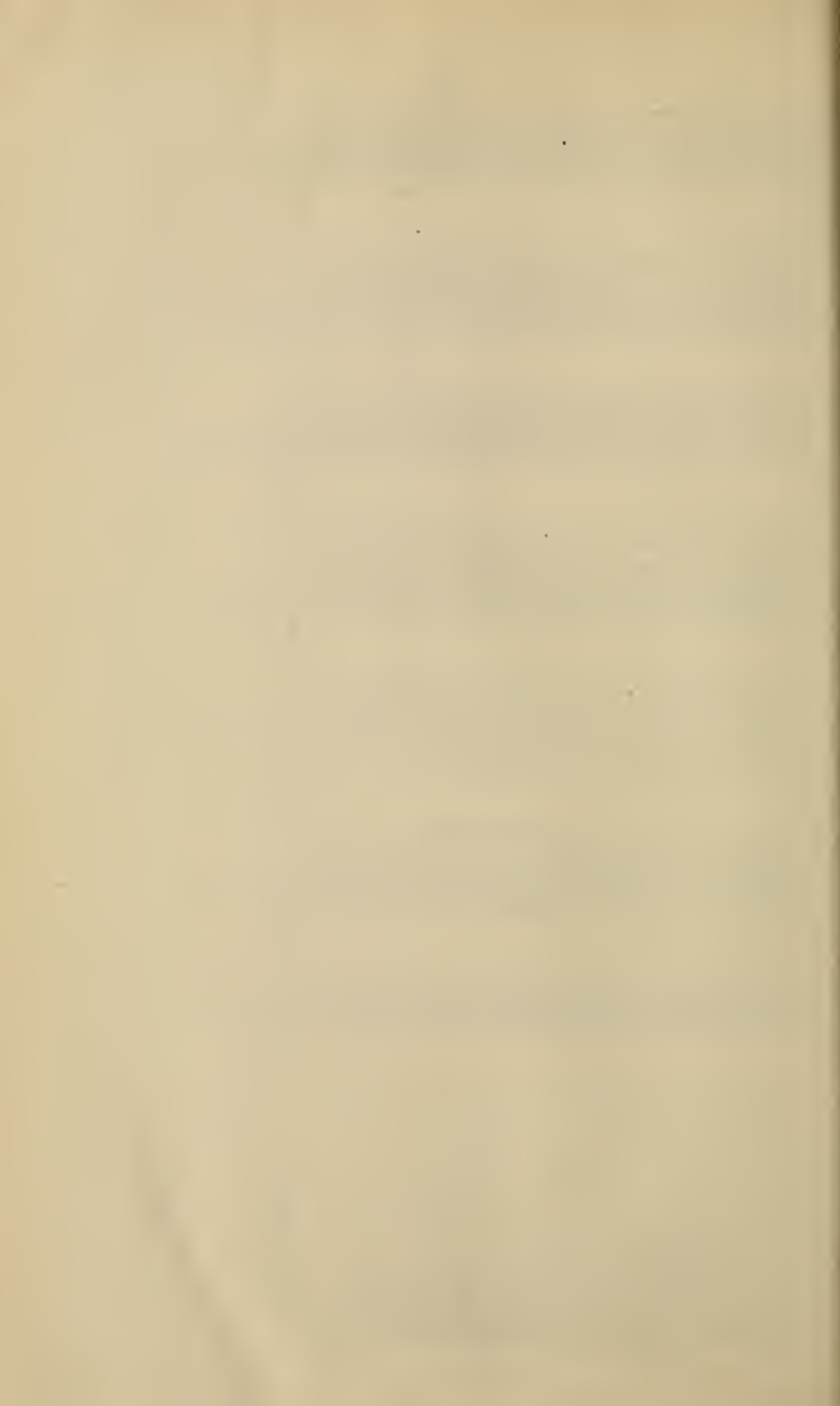
Napa	346,311	6,475,114 00	1,533,856 00	8,008,964 00	48,454 23	111,725 05	160,179 28
Nevada	187,592	5,249,965 00	2,643,582 00	7,893,547 00	47,755 95	86,431 34	134,100 29
Placer	294,286	4,387,753 00	2,508,376 00	6,896,129 00	41,721 58	47,928 10	89,649 08
Plumas	117,708	1,136,953 00	599,028 00	1,735,981 00	10,502 68	38,104 78	48,607 46
Sacramento	599,781	13,300,095 00	6,214,565 00	19,514,660 00	118,063 70	135,628 88	253,690 58
San Benito	299,715	3,011,600 00	1,628,550 00	4,640,150 00	28,072 90	25,288 82	53,361 72
San Bernardino	425,476	1,591,853 00	860,069 00	2,451,922 00	13,624 12	40,421 99	54,046 11
San Diego	798,529	1,493,361 00	1,086,605 00	3,070,969 00	18,633 81	58,220 80	76,854 61
San Francisco	7,017	169,923,292 00	99,455,314 00	269,078,606 00	1,627,925 55	2,690,786 06	4,318,711 61
San Joaquin	856,030	14,792,795 00	5,903,501 00	20,696,296 00	125,206 11	133,481 21	258,690 32
San Luis Obispo	1,010,678	3,641,924 00	1,719,658 00	5,361,582 00	32,437 57	47,986 15	80,423 72
San Mateo	259,288	5,316,736 00	820,860 00	6,167,596 00	37,313 95	70,618 97	107,932 92
Santa Barbara	991,899	4,756,055 00	2,600,822 00	6,556,877 00	40,879 10	72,636 43	113,515 53
Santa Clara	547,589	21,191,807 00	5,170,839 00	26,362,646 00	177,644 00	201,070 36	381,714 36
Santa Cruz	233,064	5,479,275 00	2,009,014 00	7,488,219 00	45,304 32	63,276 29	108,580 61
Shasta	109,965	949,660 00	983,636 00	1,933,296 00	11,694 50	32,766 76	44,461 26
Sierra	27,343	1,476,500 00	758,175 00	2,234,675 00	13,519 78	39,218 55	52,738 33
Siskiyou	180,695	1,651,179 00	1,571,715 00	3,222,894 00	19,497 61	36,900 32	56,337 93
Solano	472,812	7,419,555 00	2,334,530 00	9,754,085 00	59,012 21	146,013 99	205,026 20
Sonoma	684,676	12,111,359 00	4,498,039 00	16,609,418 00	100,186 39	148,209 61	248,396 00
Stanislaus	730,554	4,767,545 00	2,668,925 00	7,436,470 00	44,990 64	59,119 94	104,110 58
Sutter	365,646	3,319,891 00	1,173,242 00	4,493,133 00	27,183 45	41,112 17	68,235 62
Tehama	409,835	2,335,641 00	1,534,662 00	3,870,303 00	23,415 33	52,055 57	75,470 90
Trinity	34,510	426,268 00	515,365 00	941,633 00	5,696 88	19,727 21	25,424 09
Tulare	899,287	3,002,981 00	2,115,341 00	5,118,322 00	30,965 85	53,998 30	84,964 15
Tuolumne	157,377	774,053 00	609,779 00	1,383,864 00	8,372 39	26,224 27	34,596 66
Ventura	486,894	2,272,855 00	892,839 00	3,165,694 00	19,132 45	34,666 37	53,818 82
Yolo	546,624	6,867,755 00	2,460,344 00	9,328,099 00	56,434 99	92,814 52	149,249 51
Yuba	217,536	3,358,875 00	1,564,075 00	4,922,950 00	29,753 85	91,382 16	121,666 61
Totals	23,424,778	\$418,840,023 00	\$199,243,292 00	\$618,083,315 00	\$3,759,093 99	\$6,187,544 11	\$9,926,638 10

STATEMENT No. 14.

Amounts charged Tax Collectors for the fiscal year 1876-7, and also the number of acres of land assessed for said year.

COUNTIES.	Number of Acres of Land	Value of Real Estate	Value of Personal Property	Total Value of Taxable Property	Amount of Tax for State Purposes	Amount of Tax for County Purposes	Total Amount of Tax charged Tax Collector
Alameda	421,572	\$32,760,979 00	\$3,628,982 00	\$36,389,961 00	\$267,466 21	\$253,044 86	\$520,511 07
Alpine	41,725	248,935 00	204,176 00	453,111 00	3,330 36	9,719 00	13,049 36
Amador	153,470	1,821,445 00	754,963 00	2,576,408 00	18,936 59	50,624 20	69,560 79
Butte	494,828	8,048,823 00	1,865,734 00	9,914,057 00	72,868 31	125,412 83	198,281 14
Calaveras	200,684	1,170,106 00	788,110 00	1,908,216 00	14,025 39	45,129 31	59,154 70
Colusa	1,020,328	8,103,157 00	1,794,784 00	9,897,941 00	72,749 86	105,413 47	178,163 33
Contra Costa	441,867	6,060,149 00	1,167,771 00	7,227,920 00	53,125 21	79,868 52	132,993 73
Del Norte	45,560	403,454 00	248,422 00	651,876 00	4,791 28	11,506 14	16,297 42
El Dorado	203,881	1,516,663 00	821,000 00	2,337,663 00	17,181 82	37,402 61	54,584 43
Fresno	1,525,218	5,637,627 00	2,387,734 00	8,025,361 00	58,986 55	77,444 93	136,431 48
Humboldt	612,832	3,265,674 00	1,695,983 00	4,961,657 00	36,468 18	77,649 93	114,118 11
Inyo	63,029	1,470,502 00	623,123 00	2,093,625 00	15,388 15	47,420 60	62,808 75
Kern	1,673,933	4,217,108 00	2,053,215 00	6,270,323 00	46,086 87	103,027 88	151,114 75
Lake	182,358	1,650,014 00	496,818 00	2,146,832 00	15,779 21	45,405 49	61,184 70
Lassen	117,579	520,073 00	588,956 00	1,109,029 00	8,151 21	22,346 54	30,497 75
Los Angeles	1,115,690	11,955,221 00	2,925,701 00	14,880,922 00	108,984 47	165,477 34	274,461 81
Marin	318,988	6,446,789 00	1,343,508 00	7,790,297 00	57,258 68	75,176 36	132,435 04
Mariposa	189,004	920,980 00	544,413 00	1,465,393 00	10,770 83	34,893 82	45,674 65
Mendocino	670,865	3,758,544 00	2,140,269 00	5,898,813 00	43,356 28	82,288 44	125,644 72
Merced	1,017,611	4,749,839 00	1,390,440 00	6,140,279 00	45,131 05	63,351 88	108,682 93
Modoc	117,289	448,887 00	635,042 00	1,083,929 00	7,966 88	16,421 52	24,388 40
Mono	43,688	283,042 00	280,377 00	563,419 00	4,141 11	8,535 75	12,676 86
Monterey	837,325	7,127,206 00	1,671,131 00	8,798,337 00	64,067 77	67,307 28	131,975 05

Napa	332,452	6,793,025 00	1,322,551 00	8,115,276 00	59,647 28	107,155 24	166,802 52
Nevada	204,226	5,405,490 00	1,591,556 00	6,996,846 00	51,426 82	81,513 25	132,940 07
Nicer	294,778	4,322,470 00	1,410,100 00	5,732,570 00	42,354 89	44,083 66	86,138 55
Plumas	185,339	1,401,390 00	578,887 00	1,980,277 00	14,559 44	35,452 92	50,512 36
Sacramento	610,739	13,298,297 00	4,619,995 00	17,918,292 00	131,699 44	163,952 54	295,651 98
San Benito	307,245	3,607,249 00	746,291 00	4,353,540 00	32,010 27	33,224 98	65,248 25
San Bernardino	499,477	2,133,092 00	595,388 00	2,728,480 00	20,054 32	48,319 98	68,374 30
San Diego	849,440	2,210,791 00	1,045,841 00	3,256,632 00	22,489 81	53,547 18	76,036 99
San Francisco	6,993	190,222,563 00	70,354,615 00	260,576,978 00	1,915,240 79	3,622,019 99	5,537,260 78
San Joaquin	858,650	14,610,455 00	3,268,672 00	17,879,127 00	131,411 58	136,771 47	268,183 05
San Luis Obispo	91,404	4,124,897 00	1,203,442 00	5,330,339 00	39,279 58	54,196 72	93,476 30
San Mateo	274,986	5,589,735 00	824,425 00	6,414,160 00	47,144 07	81,139 13	128,283 20
Santa Barbara	1,591,706	4,840,185 00	1,248,333 00	6,088,518 00	44,750 60	67,886 98	112,637 58
Santa Clara	558,256	24,052,219 00	4,123,650 00	28,175,269 00	207,088 22	257,803 72	464,891 94
Santa Cruz	231,212	5,640,874 00	1,006,001 00	6,646,875 00	48,854 53	90,729 84	139,584 37
Shasta	117,305	1,068,453 00	797,163 00	1,865,616 00	13,712 27	32,926 66	46,638 93
Sierra	94,297	1,361,860 00	429,884 00	1,791,744 00	13,169 32	35,207 79	48,377 11
Siskiyou	187,227	1,546,650 00	1,073,341 00	2,619,891 00	19,256 13	27,301 75	47,137 88
Solano	499,036	8,040,325 00	1,454,279 00	9,494,804 00	69,786 80	148,589 50	218,376 30
Sonoma	698,512	12,396,993 00	2,847,305 00	15,243,398 00	112,038 87	139,477 19	251,516 06
Stanislaus	774,315	4,066,319 00	1,923,286 00	5,991,605 00	44,038 30	54,823 18	98,861 48
Sutter	374,682	3,284,263 00	766,324 00	4,050,587 00	29,727 67	47,119 37	76,847 04
Tehama	437,891	2,668,232 00	993,064 00	3,661,896 00	26,014 93	53,646 77	80,561 70
Trinity	57,782	499,212 00	331,521 00	830,733 00	6,105 88	17,154 64	23,260 52
Tulare	957,931	3,280,147 00	1,477,394 00	4,757,541 00	34,967 93	74,455 52	109,423 45
Tuolumne	167,319	1,103,835 00	675,070 00	1,778,905 00	13,074 95	29,618 77	42,693 72
Ventura	470,672	2,746,451 00	745,408 00	3,491,859 00	25,665 16	38,934 25	64,599 41
Yolo	536,075	8,506,502 00	1,736,573 00	10,243,075 00	75,286 60	107,040 14	182,326 74
Yuba	237,364	3,234,980 00	1,207,265 00	4,442,245 00	32,650 50	85,766 47	118,416 97
Totals	24,015,065	\$454,644,311 00	\$140,431,866 00	\$595,073,177 00	\$4,372,019 22	\$7,377,948 30	\$11,749,970 52



STATEMENT

OF

DELINQUENT TAXES FOR 1875-6 AND 1876-7.

STATEMENT NO. 15.

Delinquent taxes charged Tax Collectors for the fiscal year 1875-6.

COUNTIES.

	Real Estate Delinquent for Taxes -----	Personal Property De- linquent for Taxes-----	Delinquent Tax on Real Estate for State Pur- poses -----	Delinquent Tax on Per- sonal Property for State Purposes -----	Total Delinquent Tax for State Purposes -----
Alameda.....	\$3,258,268 00	\$295,307 00	\$19,712 52	\$17,866 06	\$37,578 58
Alpine.....	95,093 00	29,251 00	575 31	176 97	752 28
Amador.....	168,820 00	134,412 00	1,021 36	813 19	1,834 55
Butte.....	645,495 00	155,567 00	3,908 26	3,941 18	4,849 44
Calaveras.....	177,456 00	103,160 00	1,073 60	624 12	1,697 72
Colusa.....	552,861 00	257,855 00	3,344 80	1,560 02	4,904 82
Contra Costa.....	773,102 00	133,479 00	4,677 26	1,170 55	5,847 81
Del Norte.....	15,265 00	10,160 00	92 35	61 46	153 81
El Dorado.....	229,948 00	123,744 00	1,391 18	748 65	2,139 83
Fresno.....	1,118,467 00	707,531 00	6,766 72	4,280 56	11,047 28
Humboldt.....	260,387 00	159,639 00	1,575 34	965 81	2,541 15
Inyo.....	247,318 00	115,504 00	1,496 27	698 79	2,195 06
Iron.....	764,172 00	603,684 00	4,623 25	3,652 30	8,275 55
Los Angeles.....	268,889 00	130,157 00	1,626 77	787 40	2,414 17
Los Angeles.....	82,549 00	91,093 00	499 43	551 12	1,050 55
Los Angeles.....	1,099,368 00	2,130,004 00	6,651 18	12,886 52	19,537 70
Marin.....	659,558 00	58,598 00	3,990 33	354 52	4,344 85
Mariposa.....	128,190 00	91,305 00	775 54	552 39	1,327 93
Mendocino.....	425,995 00	277,312 00	2,325 41	1,513 79	3,839 20
Merced.....	21,847 00	103,413 00	1,32 17	625 65	757 82
Modoc.....	137,253 00	203,342 00	830 62	1,230 22	2,060 84
Monterey.....	28,429 00	50,244 00	171 94	303 97	475 91
Monterey.....	436,579 00	224,006 00	2,641 30	1,355 24	3,996 54
Napa.....	570,955 00	178,383 00	3,454 27	1,079 21	4,533 48

Nevada	246,715 00	126,485 00	1,492 63	765 23	2,257 86
Niacr	190,550 00	110,261 00	1,152 83	667 08	1,819 91
Plumas	230,920 00	60,853 00	1,397 06	368 16	1,765 22
Sacramento	915,650 00	797,375 00	5,539 68	4,825 01	10,365 01
San Benito	245,986 00	107,993 00	1,306 70	653 35	1,960 05
San Bernar	237,304 00	220,286 00	1,798 69	1,332 73	3,131 42
San Diego	378,878 00	186,530 00	2,292 21	1,428 50	3,720 71
San Francisco	12,162,128 00	59,506,822 00	73,580 88	360,016 28	433,597 16
San Joaquin	672,591 00	1,177,527 00	4,069 17	7,124 93	11,193 20
San Luis Obispo	500,973 00	303,934 00	3,025 44	1,838 80	4,864 24
San Mateo	442,337 00	76,263 00	2,676 13	461 39	3,137 52
Santa Barbara	484,900 00	95,092 00	2,933 64	575 31	3,508 95
Santa Clara	819,985 00	189,647 00	5,142 40	1,147 36	6,289 76
Santa Cruz	318,415 00	169,400 00	1,926 58	1,024 87	2,951 45
Shasta	244,111 00	137,256 00	1,476 87	830 39	2,307 26
Sierra	146,585 00	35,094 00	886 84	212 32	1,099 16
Siskiyou	157,728 00	105,997 00	936 56	656 99	1,593 55
Solano	379,720 00	464,398 00	2,297 30	2,810 82	5,108 12
Sonoma	979,697 00	687,930 00	5,927 16	4,161 97	10,089 13
Stanislaus	939,700 00	463,355 00	5,655 18	2,803 30	8,458 48
Sutter	301,552 00	101,486 00	1,823 17	613 99	2,437 16
Tehama	133,646 00	117,786 00	808 55	712 60	1,521 15
Trinity	32,145 00	24,666 00	194 47	149 23	343 70
Tulare	393,606 00	381,971 00	2,281 32	2,310 92	4,602 24
Tuolumne	116,445 00	66,957 00	704 50	405 08	1,109 58
Ventura	474,371 00	112,924 00	2,869 91	683 19	3,553 13
Yolo	400,101 00	111,559 00	2,420 61	674 81	3,095 42
Yuba	143,810 00	102,185 00	870 05	618 22	1,488 27
Totals	\$34,916,274 00	\$72,469,562 00	\$210,973 74	\$454,371 94	\$665,345 68

STATEMENT NO 16.

Delinquent taxes charged Tax Collectors for the fiscal year 1876-7.

COUNTIES.	Real Estate Delinquent for Taxes-----	Personal Property De- linquent for Taxes---	Delinquent Tax on Real Estate for State Pur- poses-----	Delinquent Tax on Per- sonal Property for State Purposes-----	Total Delinquent Tax for State Purposes----
Alameda-----	\$2,847,730 00	\$588,266 00	\$20,930 82	\$4,103 25	\$25,034 07
Alpine-----	129,142 00	4,267 00	949 19	31 36	980 55
Amador-----	142,675 00	91,353 00	1,048 65	671 45	1,720 10
Butte-----	298,449 00	73,137 00	2,193 60	748 83	2,942 43
Calaveras-----	249,305 00	124,065 00	1,832 39	911 87	2,744 26
Colusa-----	295,378 00	153,206 00	2,171 02	1,126 05	3,297 07
Contra Costa-----	762,905 00	67,055 00	5,607 35	492 86	6,100 21
Del Norte-----	9,533 00	9,837 00	62 71	51 62	114 33
El Dorado-----	242,133 00	150,467 00	1,779 68	1,105 93	2,885 61
Fresno-----	906,804 00	751,643 00	6,665 00	5,524 57	12,189 57
Humboldt-----	678,836 00	122,729 00	4,989 45	902 05	5,891 50
Inyo-----	778,931 00	278,548 00	5,725 14	2,047 33	7,772 47
Kern-----	327,897 00	54,649 00	2,410 06	401 68	2,811 74
Lake-----	98,218 00	97,399 00	721 90	715 88	1,437 78
Lassen-----	1,518,246 00	469,691 00	11,159 11	3,452 23	14,611 34
Los Angeles-----	571,651 00	205,983 00	4,201 49	1,513 97	5,715 46
Marin-----	113,193 00	75,774 00	831 97	600 06	1,432 03
Mariposa-----	358,643 00	233,571 00	2,636 03	1,716 75	4,352 78
Mendocino-----	277,382 00	240,561 00	2,038 76	1,768 12	3,806 88
Merced-----	95,003 00	144,022 00	698 27	970 10	1,668 37
Modoc-----	52,655 00	69,260 00	353 60	481 33	834 93
Mono-----	486,445 00	115,750 00	3,575 37	850 76	4,426 13
Monterey-----					
Napa-----					

Nevada	421,106 00	99,830 00	3,093 13	733 89	3,829 02
Placer	209,228 00	142,877 00	1,528 36	1,050 14	2,588 70
Plumas	237,369 00	73,709 00	1,744 66	556 46	2,301 12
Sacramento	682,630 00	513,740 00	5,017 33	2,775 98	8,793 31
San Benito	537,634 00	42,690 00	3,951 60	313 77	4,265 37
San Bernardino	267,950 00	121,812 00	1,969 42	917 35	2,886 78
San Diego	334,879 00	187,046 00	2,461 37	1,374 80	3,836 17
San Francisco	12,214,107 00	29,255,140 00	41,628 79	215,025 28	256,654 07
San Joaquin	442,113 00	291,282 00	3,076 56	2,026 97	5,103 53
San Luis Obispo	570,314 00	100,187 00	4,191 80	741 00	4,932 80
San Mateo	559,776 00	112,141 00	4,114 35	824 24	4,938 59
Santa Barbara	332,904 00	52,932 00	2,446 80	389 44	2,836 24
Santa Clara	769,517 00	221,408 00	5,655 95	1,627 35	7,283 30
Santa Cruz	427,270 00	89,216 00	3,140 43	635 73	3,776 16
Shasta	97,661 00	78,318 00	717 80	575 63	1,293 43
Sierra	109,205 00	49,996 00	802 66	367 47	1,170 13
Siskiyou	127,269 00	95,803 00	819 83	617 16	1,436 99
Solano	396,111 00	111,936 00	2,910 84	822 83	3,733 67
Sonoma	841,767 00	250,262 00	6,180 98	1,839 43	8,020 41
Stanislaus	405,922 00	253,929 00	2,982 52	1,866 36	4,849 88
Sutter	230,852 00	45,125 00	1,696 76	331 67	2,028 43
Tehama	122,646 00	130,537 00	901 45	959 59	1,861 04
Trinity	51,932 00	22,290 00	381 70	163 83	545 53
Tulare	276,920 00	138,460 00	2,035 36	1,017 68	3,053 04
Tuolumne	157,945 00	101,120 00	1,160 89	743 23	1,904 12
Ventura	253,771 00	109,189 00	1,863 22	802 54	2,667 76
Yolo	324,322 00	115,979 00	2,383 76	852 45	3,236 21
Yuba	104,340 00	41,220 00	766 90	302 96	1,069 86
Totals	\$32,748,694 00	\$35,945,991 00	\$192,227 99	\$271,463 28	\$463,691 27

STATEMENT

OF

COMMISSIONS AND MILEAGE ALLOWED FOR ASSESSING
COLLECTING, KEEPING, AND PAYING IN STATE TAXES

FOR THE

Twenty-seventh and Twenty-eighth Fiscal Years.

STATEMENT No. 17.

Commissions and mileage allowed for assessing, auditing, collecting, keeping, and paying in State taxes for the twenty-seventh fiscal year, commencing July 1st, 1875, and ending June 30th, 1876.

COUNTIES.	Assessor's Commissions.	Auditor's Commissions.	Treasurer's Commissions and Mileage	Tax Collector's Commissions	Assessor, as Collector, on Personal Property	Totals
Alameda	\$2,872 78	\$1,904 57	\$4,285 91	\$3,049 83		\$12,113 09
Alpine	107 34	53 67	196 85	143 87		501 73
Amador	526 64	263 32	313 38	289 78		1,393 12
Butte	1,292 29	719 22	1,183 14	864 53	35 76	4,094 94
Calaveras	376 28	188 15	290 90	212 04	1 44	1,068 81
Colusa	1,290 79	718 09	1,181 09	1,375 44	72 69	4,638 10
Contra Costa	1,105 04	586 69	971 00	678 07	38 42	3,379 22
Del Norte	160 38	80 19	175 95	152 90	10	569 52
El Dorado	535 16	267 58	319 15	579 32		1,701 21
Fresno	1,081 52	571 01	941 11	733 40	21 42	3,348 46
Humboldt	917 52	461 67	792 04			2,171 23
Inyo	321 09	160 54	352 06		1 90	1,021 06
Kern	810 22	405 11	683 26	439 27		2,357 86
Lake	466 94	233 47	361 29	293 28		1,354 98
Lassen	290 26	145 12	291 14	203 51	2 09	932 12
Los Angeles	1,462 05	846 53	1,643 48	1,125 05		5,077 11
Marin	1,127 98	601 99	948 58	784 98		3,463 53
Mariposa	316 63	158 31	270 34	197 89	23	943 40
Mendocino	967 00	494 67	824 88	559 73	31 22	2,877 50
Merced	1,035 32	540 21	830 75	674 92		3,081 20
Modoc	185 81	92 91	188 00	199 46		666 76
Mono	136 47	68 23	268 63	116 25	58	589 58

Monterey	1,244 35	683 26	1,551 23	3,478 84
Napa	1,149 27	616 18	931 44	2,696 89
Nevada	1,141 75	611 17	925 56	2,678 48
Placer	1,221 66	666 24	1,131 12	4,137 39
Plumas	372 47	186 23	288 78	1,070 48
Sacramento	1,839 47	1,129 61	1,666 28	6,793 78
San Benito	848 56	424 28	686 75	2,582 95
San Bernardino	444 28	222 14	417 38	1,345 71
San Diego	656 16	328 08	363 75	1,902 23
San Francisco	19,373 37	5,742 80	9,386 66	41,565 86
San Joaquin	1,852 84	1,139 63	1,753 94	6,971 73
San Luis Obispo	923 38	465 60	798 61	2,187 59
San Mateo	1,013 94	525 95	817 59	3,015 20
Santa Barbara	1,002 50	518 34	897 73	3,059 57
Santa Clara	2,446 70	1,385 03	3,523 13	11,509 89
Santa Cruz	1,087 43	574 92	984 89	3,852 16
Shasta	441 47	220 73	360 41	1,285 23
Sierra	488 30	244 15	336 78	1,359 71
Siskiyou	669 95	334 98	539 86	1,996 75
Solano	1,265 18	698 89	1,122 57	4,236 86
Sonoma	1,643 06	982 30	1,903 88	6,238 64
Stanislaus	1,086 67	574 45	868 80	3,284 58
Sutter	822 54	411 27	534 92	2,308 39
Tehama	737 01	368 50	525 90	2,071 35
Trinity	203 76	101 87	196 49	676 03
Tulare	891 51	445 75	744 62	2,660 68
Tuolumne	311 98	156 00	233 75	913 82
Ventura	617 76	308 88	403 22	1,860 25
Yolo	1,237-28	677 96	1,033 74	3,819 62
Yuba	875 49	437 74	585 85	2,383 77
Totals	\$65,295 60	\$30,944 18	\$64,121 94	\$194,289 01

STATEMENT No. 18.

Commissions and mileage allowed for assessing, auditing, collecting, keeping, and paying in, State taxes for the twenty-eighth fiscal year, commencing July 1st, 1876 and ending June 30th, 1877.

COUNTIES.	Assessor's Commissions.	Auditor's Commissions.	Treasurer's Commissions and Mileage	Tax Collector's Commissions	Assessor's Commissions as Collector on Personal Property	Total
Alameda	\$3,326 54	\$2,244 91	\$5,456 21	\$3,860 34	\$30 49	\$14,918 49
Alpine	115 74	57 87	239 18	112 60	52	525 91
Amador	646 22	323 11	443 12	382 82	18	1,795 45
Butte	1,428 00	821 00	1,551 10	1,137 11	35 12	4,972 33
Calaveras	496 07	248 04	337 31	290 67	74	1,392 83
Colusa	1,422 69	817 65	1,540 38	593 34	2 00	4,375 46
Contra Costa	1,223 00	667 23	1,213 99	900 98	151 56	4,156 76
Del Norte	181 67	90 83	192 87	176 24	33	641 94
El Dorado	591 62	295 81	383 92	661 34	-----	1,932 69
Fresno	1,250 44	687 83	1,258 71	936 94	27 17	4,161 09
Humboldt	951 28	484 18	883 21	546 59	1 07	2,866 33
Inyo	481 00	240 50	439 70	280 96	2 36	1,464 52
Kern	1,075 26	566 84	1,052 41	689 62	2 28	3,386 41
Lake	553 76	276 88	472 50	331 52	-----	1,634 66
Lassen	292 43	146 21	295 89	230 20	65	965 38
Los Angeles	1,766 41	1,074 81	2,380 70	1,638 55	82 56	6,943 03
Marin	1,261 89	696 41	1,225 81	983 68	70	4,168 49
Mariposa	415 37	207 69	339 78	251 03	11 58	1,225 45
Mendocino	1,074 70	566 46	1,015 62	732 57	10 18	3,399 33
Merced	1,088 66	575 77	961 88	785 52	5 49	3,417 32
Modoc	347 52	173 76	375 33	254 21	91	1,151 73
Mono	148 80	74 40	276 08	146 74	2 55	648 57

Monterey	1,216 67	662 50	1,565 52	959 76	17 88	4,422 33
Napa	1,289 50	717 12	1,254 28	993 31	3 16	4,254 21
Nevada	1,250 74	673 05	1,186 65			3,093 60
Placer	1,084 72	568 48	884 33	822 13	1 88	3,361 54
Pumas	533 87	266 93	403 58	334 76	1 15	1,540 29
Sacramento	2,021 08	1,265 81	2,721 04	988 29		6,996 22
San Benito	919 84	463 23	778 90	687 53	8 00	2,857 50
San Bernardino	636 42	328 21	579 27	398 02	2 46	1,964 38
San Diego	746 58	373 29	656 60	422 60	17 67	2,216 74
San Francisco	22,381 93	6,042 32	13,527 19	14,796 75		56,748 19
San Joaquin	2,056 53	1,292 40	2,852 70	2,195 28	3 18	8,400 09
San Luis Obispo	1,026 51	534 34	985 93	735 90	8 39	3,291 07
San Mateo	1,145 95	613 97	1,032 77	1,150 43		3,943 12
Santa Barbara	1,092 61	578 40	1,076 02	773 09		3,536 12
Santa Clara	2,757 64	1,818 23	4,406 86		16 00	9,031 04
Santa Cruz	1,164 27	626 18	1,137 74	836 74	48 31	3,772 01
Shasta	507 90	253 95	419 65	334 56	7 08	1,517 00
Sierra	482 32	241 16	308 21	304 05		1,335 74
Siskiyou	660 68	330 34	582 19	491 91	4 55	2,069 67
Solano	1,376 16	782 13	1,414 68	1,373 74	85	4,947 56
Sonoma	1,804 45	1,103 34	2,370 01	1,751 54	2 79	7,032 13
Stanislaus	1,144 02	581 95	944 89	808 66	11 68	3,491 20
Sutter	886 94	443 47	640 11	607 55	64	2,578 71
Tehama	823 60	411 80	643 36	535 51	1 69	2,415 96
Trinity	238 39	119 19	295 47	213 03		866 08
Tulare	942 66	478 45	840 45	629 73		2,891 29
Tuolumne	466 37	233 19	329 73	318 27		1,347 56
Ventura	794 64	397 32	705 75	549 86	1 22	2,448 79
Yolo	1,437 16	827 87	1,523 42	1,215 33		5,003 78
Yuba	936 04	474 03	704 21	577 72		2,692 00
Totals	\$73,965 26	\$34,840 24	\$69,147 21	\$51,729 62	\$527 96	\$230,210 29

STATEMENT

OF

CONTINGENT EXPENSES OF THE SENATE AND ASSEMBLY

FOR THE

Eighteenth, Nineteenth, Twentieth, and Twenty-first Sessions.

STATEMENT No. 19.

Contingent expenses of Senate, eighteenth, nineteenth, twentieth, and twenty-first sessions.

FOR WHAT PURPOSE EXPENDED.	Amount—Eight- teenth Session.	Amount—Nine- teenth Session.	Amount—Twen- tieth Session.	Amount—Twen- ty-first Session.
Arrests.....	\$166 00	\$19 00	-----	-----
Banquet to Japanese Commissioners.....	-----	1,000 00	-----	-----
Brushes.....	4 50	-----	-----	-----
Burial expenses of W. Burnett and R. T. Sprague.....	-----	737 77	-----	\$204 25
Burial expenses of James W. Mandeville.....	-----	-----	-----	84 54
Carrying mail.....	79 50	160 00	-----	-----
Carpenter work.....	204 75	277 36	-----	-----
Carpets.....	600 00	555 00	\$600 00	50 00
Chaplain.....	-----	-----	-----	1,000 00
Chinese Investigating Committee { Phonographic Reporter { Sergeant-at-Arms { Chinese Commissioners, contested election, Murphy vs. Pacheco { Commissioners to examine books of State officers.....	546 00 2,250 00	-----	-----	250 00
Contested election of Senator Beck.....	-----	1,500 00	659 00	590 01
Contested election expenses, Gildea vs. Fraser.....	-----	-----	-----	-----
Contested election expenses, Ward vs. Montgomery*.....	-----	-----	-----	-----
Copying Journals and Appendices.....	2,136 50	1,957 04	286 99	1,188 75
Correcting Senate Journals.....	-----	-----	-----	40 00
Crockery.....	47 50	44 50	-----	-----
Drayage and expressage.....	-----	65 00	8 50	-----
Delivering Journals to Secretary of State.....	-----	-----	-----	100 00
Experting.....	-----	250 00	-----	240 00
Extra clerk hire.....	18,430 00	19,250 77	10,411 29	12,183 00
Extra pay voted to Clerks and attachés.....	1,260 00	-----	630 00	654 00
Extra Pages.....	1,005 00	1,005 00	321 00	348 00
Fireman and Doorkeeper.....	856 00	956 00	-----	436 00
Furniture.....	469 30	927 50	25 50	51 50
Fuel and ice.....	73 01	74 50	86 75	60 90
Gas and gas fixtures.....	-----	152 98	21 18	-----
Hack hire.....	-----	177 50	-----	75 00
Keys and locks.....	54 25	371 75	92 75	88 75

Legal opinion.....	10 00	25 00		
Mail bag.....		416 00	475 00	8 00
Mail carrier.....	10 00			218 00
Matches and brooms.....	376 00	1,107 00		
Messenger and paper-folders.....	1,467 20	1,826 75	1,523 20	2,333 50
Mileage of committee.....	46 80			
Mileage of Messenger.....				50 00
Music at Governor's inauguration.....	2,241 72	2,017 84		
Newspapers.....	190 00			
Overseer of gas fixtures.....	20 00			4 00
Painting signs.....	200 00	420 00	610 84	284 50
Phonographic Reporter.....	1,846 00	1,662 00	472 00	482 00
Porters.....		700 00		
Portrait of ex-Governor Bigler.....	805 00	1,261 24	733 15	
Postage and expressage.....		100 00		
Repairing clock.....		20 00		
Repairing safe.....		270 00		
Room rent for committees.....	926 66			
Sergeant-at-Arms, sundries (no bill rendered).....	2,277 19			
Sponges.....	5 00	332 00		
Stationery.....		57 75		
Stoves.....	165 95		40 00	430 50
Subpœning witnesses and witness fees.....	212 00		37 50	11 00
Sundries.....				
Telegraphing.....		8 75	391 05	
Temporary officers and attachés.....	1,477 00	1,440 00	24 00	33 00
Towels and soap.....	27 05			12 50
Translating Governor's Inaugural Address.....				
Tubs, pails, and mops.....	10 88			
Washing.....		36 00	25 00	8 00
Watchmen.....	488 00	708 00	668 00	480 00
Totals.....	\$40,984 76	\$42,000 00	\$18,142 70	\$22,000 00

* Five hundred dollars of this amount was returned and paid into the State treasury by J. M. Montgomery.

STATEMENT NO. 20.

Contingent expenses of Assembly, eighteenth, nineteenth, twentieth and twenty-first sessions.

FOR WHAT PURPOSE EXPENDED.	Amount—Eighteenth Session.	Amount—Nineteenth Session.	Amount—Twentieth Session.	Amount—Twenty-first Session.
Books-----		\$299 50		
Burial expenses of Royal T. Sprague-----		237 77		
Burial expenses of James W. Mandeville-----				\$204 25
Banquet to Japanese Commissioners-----		1,000 00		
Carrying mail-----		300 00	\$282 50	353 00
Carpenter work-----	\$305 75	92 31		37 68
Certifying mortgage of G. C. H. Association-----				35 00
Chaplain-----	600 00	600 00	292 00	340 00
Cleaning carpets-----	15 02			
Cleaning globes-----				30 00
Contested election expenses-----			1,311 00	497 50
Contested election expenses, Hopper vs. Biggs-----				222 05
Contested election expenses, F. A. Pullen-----				97 00
Copying Journals and Appendices-----	2,452 70		1,068 54	284 75
Delivering books and papers to Secretary of State-----		100 00		74 00
Drayage and expressage-----	174 50	105 15		3 30
Expenses of investigations-----		125 70		
Experting for Committee Public Buildings-----	18,385 20	24,888 90		
Extra clerk hire-----	6,388 80	2,942 00	10,640 46	12,513 80
Extra pay voted Clerks and attachés-----	440 00	1,384 00	296 00	265 00
Freeman and doorkeepers-----	8 25	20 75		
Fuel and coal oil-----	1,014 74	1,698 23	46 00	
Furniture-----	210 40	137 06		
Gas fixtures and gas-----	70 42	80 50		
Glassware and crockery-----		177 50		
Hack hire-----				75 00
Hardware and rope-----	34 38			
Ice and water coolers-----		152 95	43 00	51 00
Legal opinion-----		25 00		
Locks and keys-----	189 50	430 00		
Mail bag and carpet-sweepers-----		75 00	83 25	85 00
Matches, sponges, brooms, soap, combs and brushes-----	61 00		15 00	3 00

Making diagrams					50 00
Messengers			150 50		
Mileage of committees	2,499 30		3,221 30	1,337 10	2,451 87
Mileage Sergeant-at-Arms, serving summons and telegraphing	402 50		359 00		849 55
Mileage Sergeant-at-Arms of committees			155 90		
Music for inauguration of Governor					50 00
Newspapers	5,128 19		5,075 15	2,615 17	2,464 41
Overseer of gas fixtures	190 00				
Painting signs					
Pages	1,416 00		1,434 00		42 00
Phonographic Reporter	100 00		420 00		812 80
Porters	1,954 00		1,838 00	137 00	34 00
Postage stamps	956 40		2,571 40	1,635 50	1,233 51
Printing	70 50				
Purchase of Codes					400 00
Rent of committee rooms	710 00		681 50		
Repairing clock			108 00	35 00	
Repairing furniture			90 00		70 62
Sale			115 00		
Scissors, baskets and tin cups	163 62				
Serving subpoenas and telegrams			183 00		
Slates and pencils	105 00				
Stationery	1,643 07		643 50		36 72
Stoves	157 50				
Sundries	90 00		65 50	43 50	12 25
Stenographic Reporter G. G. P. A. Investigating Committee					427 20
Temporary officers and attachés	1,484 40		567 00	375 00	476 50
Towels and washing	25 59		39 00		7 17
Translation of Governor's Message (address)	70 70				12 50
Watchman	944 00		424 00	1,017 00	1,029 00
Witness fees and mileage					292 50
Whitewashing					6 50
Wash basins	51 50				
Totals	\$48,777 93	\$53,014 07	\$28,687 32		\$25,930 43

STATEMENT No. 21.

The valuation of real and personal property, and the rate of taxation on each one hundred dollars, from the organization of the State Government to the year 1876-7.

YEAR.	Assessed Value of Property.	Tax for State Purposes.
1850-1	\$57,670,689 00	50
1851-2	49,231,052 00	65
1852-3	64,579,375 00	65
1853-4	95,335,646 00	60
1854-5	111,191,630 00	60
1855-6	103,887,193 55	60
1856-7	95,007,440 97	70
1857-8	126,059,461 82	70
1858-9	123,955,877 00	60
1859-60	131,060,279 49	60
1860-1	148,193,540 02	60
1861-2	147,811,617 16	60
1862-3	160,369,071 81	77
1863-4	174,104,955 07	92
1864-5	180,484,949 85	\$1 25
1865-6	183,509,161 00	1 15
1866-7	200,764,135 50	1 13
1867-8	212,205,339 01	1 13
1868-9	237,483,175 07	1 00
1869-70	260,563,886 08	97
1870-1	277,538,134 97	86½
1871-2	267,868,126 76	86½
1872-3	637,232,823 31	50
1873-4	528,747,043 00	50
1874-5	611,495,197 00	64.9
1875-6	618,083,315 00	60.5
1876-7	595,073,177 00	73.5

STATEMENT No. 22.

Showing the balances in the several funds, amount of warrants outstanding, and balances in the State treasury, June 30th, 1877.

FUNDS.	Balance in Fund.	Warrants Outstanding.	Balance in State Treasury.
General Fund	\$330,388 74	\$73,140 75	\$403,529 49
School Fund	220,049 95		220,049 95
Interest and Sinking Fund	249,311 07		249,311 07
State Capitol Fund	267 10		267 10
Military Fund	109 37		109 37
State Normal School Building Fund	10 24		10 24
State School Land Fund	68,064 16	1,884 62	69,948 78
State University Fund	577 27		577 27
Library Fund	1,341 08		1,341 08
Supreme Court Library Fund	3,127 40		3,127 40
University Endowment Fund	627 20		627 20
Swamp Land Fund		1,683 36	1,683 36
Folsom Branch State Prison Fund	85,494 73		85,494 73
Insane Asylum Special Fund	24,474 25		24,474 25
Levee District No. 5, Interest and Sinking Fund	15 65		15 65
San Francisco Harbor Improvement Fund	317,226 81		317,226 81
War Bond Fund	8,595 76		8,595 76
Estates of Deceased Persons' Fund	15,254 84		15,254 84
Election Reward Fund	1,201 21		1,201 21
Swamp Land District No. 1	2,613 21		2,613 21
Swamp Land District No. 2	1,097 27		1,097 27
Swamp Land District No. 5	559 98		559 98
Swamp Land District No. 17	8 00		8 00
Swamp Land District No. 18	534 72		534 72
Swamp Land District No. 41	44		44
Swamp Land District No. 45	9 85		9 85
Swamp Land District No. 46	5 24		5 24
Swamp Land District No. 49	18 70		18 70
Swamp Land District No. 51	34 08		34 08
Swamp Land District No. 59	390 38		390 38
Totals	\$1,331,408 70	\$76,708 73	\$1,408,117 43

STATEMENT No. 23.

Amount received for school purposes from interest on State school land and from property tax from the several counties of the State, and from other sources, for the year ending February 22d, 1876, and total amount distributed to the several counties for the same time.

COUNTIES.	Interest on School Lands.	Property Tax.	Total Amount.	Amount Distributed.
Alameda -----	\$190 08	\$75,491 43	\$75,681 51	\$71,654 40
Alpine -----		1,163 85	1,163 85	652 80
Amador -----	396 44	4,864 58	5,261 02	18,286 08
Butte -----	773 48	20,858 03	21,631 51	26,757 12
Calaveras -----	691 46	4,150 65	4,842 11	17,018 88
Colusa -----	1,355 16	20,551 48	21,906 64	18,017 28
Contra Costa -----	468 72	15,038 30	15,507 02	23,400 96
Del Norte -----	15 84	1,371 44	1,387 28	3,440 64
El Dorado -----	1,507 37	5,039 57	6,546 94	17,932 80
Fresno -----	4,928 25	13,722 03	18,650 28	10,736 64
Humboldt -----	2,274 41	9,428 65	11,703 06	21,987 84
Inyo -----	118 00	2,759 54	2,877 54	3,048 96
Kern -----	4,654 63	8,160 05	12,814 68	7,656 96
Lake -----	1,040 27	3,990 92	5,031 19	10,513 92
Lassen -----	1,118 14	2,466 03	3,584 17	5,122 56
Los Angeles -----	3,497 45	24,994 84	28,492 29	59,804 16
Marin -----		15,646 39	15,646 39	12,648 96
Mariposa -----	657 36	3,247 61	3,904 97	7,142 40
Mendocino -----	3,471 07	12,085 92	15,556 99	21,565 44
Merced -----	1,724 65	14,824 61	16,549 26	8,993 28
Modoc -----	218 35	684 55	902 90	6,497 28
Mono -----	238 56	1,256 69	1,495 25	860 16
Monterey -----	1,190 00	17,669 17	18,859 17	25,236 48
Napa -----	950 83	16,183 89	17,134 72	21,672 96
Nevada -----	379 13	15,818 47	16,197 60	36,134 40
Placer -----	1,585 27	9,381 58	10,966 85	19,345 92
Plumas -----	314 92	3,921 97	4,236 89	6,405 12
Sacramento -----	1,494 27	44,386 97	45,881 24	49,781 76
San Benito -----	411 84	8,536 58	9,248 42	11,182 08
San Bernardino -----	2,784 33	3,649 05	6,433 38	15,137 28
San Diego -----	328 87	5,719 62	6,048 49	14,085 12
San Francisco -----		454,457 67	454,457 67	315,041 28
San Joaquin -----	4,544 61	36,326 60	40,871 21	40,028 16
San Luis Obispo -----	3,603 27	9,922 58	13,525 85	15,452 16
San Mateo -----	1,389 69	13,029 26	14,418 95	17,971 20
Santa Barbara -----	1,282 50	12,049 59	13,332 09	17,525 76
Santa Clara -----	515 92	70,169 40	70,685 32	64,588 80
Santa Cruz -----	1,032 34	15,132 23	16,164 57	24,668 16
Shasta -----	738 72	3,491 76	4,230 48	11,650 56
Sierra -----	298 53	4,468 78	4,767 31	8,563 20
Siskiyou -----	1,203 48	7,113 22	8,316 70	13,094 40
Solano -----	1,422 85	20,542 75	21,965 60	35,558 40
Sonoma -----	1,517 06	33,116 87	34,633 93	53,783 04
Stanislaus -----	1,254 60	13,594 53	14,849 13	14,661 12
Sutter -----	208 46	10,912 42	11,120 88	11,896 32
Tehama -----	1,474 07	11,638 17	13,112 24	10,944 00
Trinity -----	190 08	2,028 45	2,218 53	4,930 56
Tulare -----	2,586 35	9,617 00	12,203 35	21,788 16
Tuolumne -----	321 54	2,789 41	3,110 75	14,376 96
Ventura -----	157 26	5,030 28	5,187 54	8,616 96
Yolo -----	650 39	18,364 19	19,014 58	19,706 88
Yuba -----	426 63	10,780 70	11,207 33	20,037 12
Totals -----	\$63,597 50	\$1,151,940 12	\$1,215,537 62	\$1,317,603 84
Receipts from other sources (distributed) -----			102,066 22	
Total -----			\$1,317,603 84	

STATEMENT No. 24.

Amount received for school purposes from interest on State school land and from property tax from the several counties of the State, and from other sources, for the year ending February 22d, 1877, and total amount distributed to the several counties for the same time.

COUNTIES.	Interest on School Land.	Property Tax.	Total Amount.	Amount Distributed.
Alameda	\$221 76	\$78,886 40	\$79,108 16	\$88,474 26
Alpine	115 82	753 77	869 59	678 30
Amador	405 34	871 47	1,276 81	19,734 54
Butte	1,446 74	22,847 19	24,293 93	28,592 34
Calaveras	914 17	3,841 23	4,755 40	16,941 54
Colusa	2,855 75	22,637 67	25,493 42	19,367 46
Contra Costa	332 27	13,852 46	14,184 73	25,528 02
Del Norte	33 00	1,352 40	1,385 40	3,495 24
El Dorado	1,680 74	4,892 87	6,573 61	19,215 84
Fresno	5,270 99	17,286 06	22,557 05	12,520 62
Humboldt	5,198 54	10,185 14	15,383 68	26,062 68
Inyo	118 81	3,076 53	3,195 34	2,880 78
Kern	4,026 32	13,186 52	17,212 84	8,738 10
Lake	1,609 20	4,522 56	6,131 76	11,938 08
Lassen	645 48	2,030 34	2,675 82	5,067 30
Los Angeles	4,529 96	31,394 16	35,924 12	74,365 62
Marin		17,137 78	17,137 78	14,156 52
Mariposa	665 28	3,049 68	3,714 96	7,213 92
Mendocino	6,827 99	12,655 95	19,483 94	24,139 50
Merced	5,007 03	13,744 19	18,751 22	9,384 48
Modoc	571 97	2,071 84	2,643 81	6,200 46
Mono	301 14	816 07	1,117 21	997 50
Monterey	2,222 13	17,528 38	19,750 51	26,341 98
Napa	2,509 77	17,903 57	20,413 34	23,301 60
Nevada	1,244 04	15,830 07	17,074 11	37,841 16
Placer	1,254 67	19,295 81	20,550 48	20,317 08
Plumas	1,032 31	3,752 79	4,785 10	6,886 74
Sacramento	1,483 09	41,752 93	43,236 02	52,021 62
San Benito	265 34	9,385 44	9,650 78	12,233 34
San Bernardino	2,438 91	4,818 00	7,256 91	16,789 92
San Diego	813 72	7,372 95	8,186 67	13,302 66
San Francisco		533,963 47	533,963 47	368,979 24
San Joaquin	6,386 92	46,423 98	52,810 90	41,464 08
San Luis Obispo	5,570 04	12,489 16	18,059 20	18,114 60
San Mateo	3,617 50	13,750 53	17,368 03	19,965 96
Santa Barbara	2,298 41	11,833 73	14,132 14	21,593 88
Santa Clara	471 51	63,352 81	63,824 32	71,045 94
Santa Cruz	1,139 23	14,402 99	15,542 22	26,956 44
Shasta	1,565 25	4,351 01	5,916 26	12,903 66
Sierra		231 75	231 75	8,825 88
Siskiyou	10,136 07	5,602 14	15,738 21	14,124 60
Solano	985 71	20,665 88	21,651 59	35,814 24
Sonoma	1,632 23	28,295 89	29,928 12	58,916 34
Stanislaus	5,422 93	14,808 66	20,231 59	15,457 26
Sutter	380 35	11,878 46	12,258 81	12,584 46
Tehama	2,780 20	8,269 04	11,049 24	12,975 48
Trinity	173 55	1,644 90	1,818 45	5,322 66
Tulare	4,057 19	10,580 60	14,637 79	25,009 32
Tuolumne	392 45	3,849 54	4,241 99	14,563 50
Ventura	193 60	7,668 39	7,861 99	10,565 52
Yolo	2,867 60	17,488 62	20,356 22	22,974 42
Yuba	444 47	10,256 88	10,701 35	21,713 58
Totals	\$106,557 49	\$1,260,540 65	\$1,367,098 14	\$1,474,600 26
Receipts from other sources (distributed)			107,502 12	
Total			\$1,474,600 26	

ESTIMATE OF EXPENDITURES

FOR THE

THIRTIETH AND THIRTY-FIRST FISCAL YEARS.

STATEMENT No. 25

Estimate of expenditures for the thirtieth and thirty-first fiscal years, ending June 30th, 1880.

FOR WHAT PURPOSE.	Amount.	Total.
Per diem and mileage of Lieutenant-Governor and Senators.....	\$52,000 00	-----
Per diem and mileage of Assemblymen.....	102,000 00	-----
Pay of officers and Clerks of Senate.....	13,000 00	-----
Pay of officers and Clerks of Assembly.....	14,500 00	-----
Contingent expenses of Senate.....	15,000 00	-----
Contingent expenses of Assembly.....	20,000 00	-----
Total for Legislative Department.....		\$216,500 00
Salaries of Justices of Supreme Court.....	\$60,000 00	-----
Salaries of District Judges.....	230,000 00	-----
Salary of Clerk of Supreme Court.....	8,000 00	-----
Salary of Deputy Clerk of Supreme Court.....	3,600 00	-----
Salary of Reporter of Supreme Court.....	12,000 00	-----
Salary of Phonographic Reporter of Supreme Court.....	6,000 00	-----
Salary of Secretary to Justices of Supreme Court.....	6,000 00	-----
Salaries of Bailiff and Porter of Supreme Court.....	2,400 00	-----
Pay of Porter for office of Clerk of Supreme Court.....	490 00	-----
Postage and contingent expenses of Supreme Court.....	500 00	-----
Postage and contingent expenses of Clerk of Supreme Court.....	300 00	-----
Total for Judicial Department.....		329,200 00
Salary of Governor.....	\$14,000 00	-----
Salary of Private Secretary.....	4,800 00	-----
Salary of Executive Clerk.....	4,800 00	-----
Pay of Porter.....	1,200 00	-----
Special contingents (secret service).....	5,000 00	-----
Postage, expressage, and telegraphing.....	1,000 00	-----
Total for Governor's office.....		30,800 00
Salary of Secretary of State.....	\$8,000 00	-----
Salary of Deputy.....	4,800 00	-----
Salaries of Clerks.....	17,700 00	-----
Pay of Porter.....	300 00	-----
Postage and expressage.....	2,800 00	-----
Contingent expenses.....	200 00	-----
Total for Secretary of State's office.....		33,800 00
Salary of Controller.....	\$8,000 00	-----
Salary of Deputy.....	6,000 00	-----
Salary of Book-keeper.....	4,800 00	-----
Salaries of Clerks.....	14,400 00	-----
Pay of Porter.....	600 00	-----
Contingent expenses.....	200 00	-----
Postage and expressage.....	500 00	-----
Total for Controller's office.....		34,500 00
Salary of Treasurer.....	\$8,000 00	-----
Salaries of Clerks.....	8,400 00	-----
Salaries of Watchmen.....	4,800 00	-----
Pay of Porter.....	300 00	-----
Postage and expressage.....	300 00	-----
Total for Treasurer's office.....		21,800 00
Amount carried forward.....		\$666,600 00

ESTIMATE OF EXPENSES—Continued.

FOR WHAT PURPOSE.	Amount.	Total.
Amount brought forward.....		\$666,600 00
Salary of Attorney-General.....	\$8,000 00	
Salary of Clerk.....	3,600 00	
Pay of Porter.....	200 00	
Postage and expressage.....	200 00	
Costs and expenses of suits wherein the State is a party in interest.....	8,000 00	
Total for Attorney-General's office.....		20,000 00
Salary of Surveyor-General.....	\$4,000 00	
Salary of Deputy.....	4,800 00	
Salaries of Clerks.....	10,800 00	
Pay of Porter.....	600 00	
Postage and expressage.....	250 00	
Purchase of maps.....	400 00	
Copying of maps.....	300 00	
Total for Surveyor-General's office.....		21,150 00
Salary of Register of Land Office.....	\$4,000 00	
Salaries of Clerks.....	7,200 00	
Postage and expressage.....	550 00	
Total for State Land Office.....		11,750 00
Salary of Superintendent of Public Instruction.....	\$6,000 00	
Salary of Deputy.....	3,600 00	
Salary of Clerk.....	3,000 00	
Pay of Porter.....	400 00	
Contingent expenses.....	200 00	
Postage and expressage.....	1,600 00	
Traveling expenses.....	3,000 00	
Total for Superintendent of Public Instruction's office.....		17,800 00
Salary of Secretary of State Board of Health.....	\$5,000 00	
Mileage and contingent expenses.....	3,000 00	
Total for State Board of Health.....		8,000 00
Salaries of members State Board of Examiners.....	\$7,000 00	
Salary of Clerk.....	2,400 00	
Total for Board of Examiners.....		9,400 00
Salary of State Librarian.....	\$6,000 00	
Salaries of Deputies.....	7,200 00	
Pay of Porter.....	1,200 00	
Postage and expressage.....	400 00	
Total for State Library.....		14,800 00
Salary Superintendent State Printing Office.....	\$4,800 00	
Support of State Printing Office.....	75,000 00	
Total for State Printing Office.....		79,800 00
Support of Insane Asylum, Stockton.....	\$375,000 00	
Support of Insane Asylum, Napa.....	200,000 00	
Transportation of insane.....	50,000 00	
Total for Insane Asylums.....		625,000 00
Amount carried forward.....		1,474,300 00

ESTIMATE OF EXPENDITURES—Continued.

FOR WHAT PURPOSE.	Amount.	Total.
Amount brought forward.....		\$1,474,300 00
Support of State Prison.....	240,000 00	
Transportation of prisoners.....	55,000 00	
Total for State Prison.....		295,000 00
Pay of employ��s of Capitol building and grounds.....	\$28,800 00	28,800 00
Services of State Board of Examination.....	\$1,600 00	
Traveling expenses of State Board of Education.....	1,000 00	
Total for State Educational Boards.....		2,600 00
Arresting criminals without the limits of the State.....	\$3,000 00	
Education and care of indigent, deaf, dumb, and blind.....	72,000 00	
Official advertisements.....	5,000 00	
Payment of rewards offered by Governor.....	4,000 00	
Restoration and preservation of fish.....	10,000 00	
Stationery, fuel, lights, etc.....	25,000 00	
Support of orphans.....	150,000 00	
Support of State Normal School.....	48,000 00	
Purchase of books for State Normal School.....	1,000 00	
Traveling expenses of Attorney and Surveyor-Generals.....	1,500 00	
Rewards for arrest of highway robbers.....	3,000 00	
Purchase of Supreme Court Reports.....	5,400 00	
Services of Registers and Receivers, United States Land Office.....	4,000 00	
Total miscellaneous.....		331,900 00
Salaries of Commissioners of Transportation.....	\$18,000 00	
Salary of Secretary.....	3,600 00	
Contingent expenses.....	600 00	
Total for Transportation Commissioners.....		22,200 00
Salary of Insurance Commissioner.....	\$6,000 00	
Salary of Clerk.....	3,600 00	
Rent, printing, and contingent expenses.....	5,000 00	
Total for Insurance Commissioner's office.....		14,600 00
Salary of Adjutant-General.....	\$6,000 00	
Salary of Assistant Adjutant-General.....	4,000 00	
Pay of Porter.....	600 00	
Postage and expressage.....	200 00	
Cleaning and transportation of arms.....	1,500 00	
Expense of National Guard.....	60,000 00	
Total for military purposes.....		72,300 00
Interest on bonds.....	\$629,490 00	629,490 00
Support of Common Schools.....	\$2,828,000 00	2,828,000 00
Deficiencies, as per annexed statement, 27th, 28th, and 29th fiscal years.....		16,594 15
Total.....		\$5,715,784 15

STATEMENT

Of deficiencies for the 27th, 28th, and 29th fiscal years.

FOR WHAT PURPOSE.	Amount.	Total.
Deficiency for stationery, fuel, and lights, etc., 27th fiscal year--	\$7,251 11	-----
Deficiency for Folsom Branch State Prison, 27th fiscal year-----	300 00	-----
Total for 27th fiscal year-----		\$7,551 11
Deficiency for postage, expressage, etc., in Secretary of State's office, 28th fiscal year-----	\$879 29	-----
Deficiency for repairs and furniture, State Normal School, 28th fiscal year-----	29 09	-----
Deficiency for payment of rewards for arrest of highway robbers, 28th fiscal year-----	3,900 00	-----
Deficiency for transportation of prisoners, 28th fiscal year-----	1,893 61	-----
Deficiency for payment for arresting criminals without the limits of the State, 28th fiscal year-----	254 00	-----
Deficiency for postage and expressage, Superintendent Public Instruction, 28th fiscal year-----	87 05	-----
		7,043 04
Deficiency for salaries of District Judges, 28th and 29th fiscal years-----		2,000 00
Total-----		\$16,594 15



BIENNIAL REPORT
OF THE
TREASURER OF CALIFORNIA,
FOR THE
TWENTY-SEVENTH AND TWENTY-EIGHTH FISCAL YEARS.

(JULY 1, 1875 TO JUNE 30, 1877.)

REPORT.

STATE OF CALIFORNIA, TREASURY DEPARTMENT, }
SACRAMENTO, July 30th, 1877. }

His Excellency,
Governor WILLIAM IRWIN:

SIR: In compliance with section three hundred and thirty-two, Political Code of the State, I respectfully submit my report of the financial transactions of the State during the twenty-seventh and twenty-eighth fiscal years, commencing July first, eighteen hundred and seventy-five, and ending June thirtieth, eighteen hundred and seventy-seven, embracing its receipts, disbursements, and debt, and containing the following exhibits, showing the condition of the several funds of the State and the transactions of this department:

First—Receipts from County Treasurers.

Second—Receipts from other sources.

Third—Disbursements.

Fourth—Transactions in each fund.

Fifth—Recapitulation—balance in all the funds.

Sixth—Transactions in State bonds.

Seventh—Bonds held in trust for School Fund.

Eighth—Bonds held in trust for University Fund.

Ninth—State debt and assets.

Tenth—Interest and coupon account.

Very respectfully, your obedient servant,

JOSÉ G. ESTUDILLO,
State Treasurer.

RECEIPTS INTO THE STATE TREASURY.

RECEIPTS.	27th Fiscal Year.	28th Fiscal Year.	Total.
<i>From County Treasurers.</i>			
Alameda -----	\$208,358 29	\$253,848 78	\$462,207 07
Alpine -----	2,325 61	2,937 35	5,262 96
Amador -----	14,017 43	17,557 38	31,574 81
Butte -----	58,994 13	71,120 47	130,114 60
Calaveras -----	11,658 95	14,098 36	25,757 31
Colusa -----	60,707 41	75,900 51	136,607 92
Contra Costa -----	44,090 62	50,373 17	94,463 79
Del Norte -----	3,784 52	5,412 46	9,196 98
El Dorado -----	18,020 65	17,611 21	35,631 86
Fresno -----	50,470 77	57,528 87	107,999 64
Humboldt -----	39,186 21	38,310 43	77,496 64
Inyo -----	7,920 63	11,645 61	19,566 24
Kern -----	24,068 83	62,515 89	86,584 72
Lake -----	12,686 14	16,801 24	29,487 38
Lassen -----	7,878 87	6,140 99	14,019 86
Los Angeles -----	78,652 15	109,260 20	187,912 35
Marin -----	42,521 32	48,077 45	90,598 77
Mariposa -----	9,093 25	10,884 96	19,978 21
Mendocino -----	41,274 46	60,734 59	102,009 05
Merced -----	40,023 54	48,614 06	88,637 60
Modoc -----	4,788 83	8,417 38	13,206 21
Mono -----	3,269 23	7,013 45	10,282 68
Monterey -----	54,592 72	51,199 74	105,792 46
Napa -----	48,920 98	62,420 86	111,341 84
Nevada -----	44,949 29	52,069 08	97,018 37
Placer -----	52,635 47	41,373 00	94,008 47
Plumas -----	11,060 25	15,118 88	26,179 13
Sacramento -----	112,241 56	129,205 07	241,446 63
San Benito -----	26,430 19	29,927 97	56,358 16
San Bernardino -----	15,466 95	21,833 02	37,299 97
San Diego -----	19,009 34	21,994 52	41,003 86
San Francisco -----	1,255,136 91	1,700,155 18	2,955,292 09
San Joaquin -----	115,178 95	140,750 38	255,929 33
San Luis Obispo -----	38,360 47	39,370 12	77,730 59
San Mateo -----	45,559 45	49,934 34	95,493 79
Santa Barbara -----	38,131 23	43,776 42	81,907 65
Santa Clara -----	168,373 93	197,244 87	365,618 80
Santa Cruz -----	41,272 83	42,779 46	84,052 29
Shasta -----	10,954 38	14,362 53	25,316 91
Sierra -----	12,155 02	13,044 49	25,199 51
Siskiyou -----	19,459 34	29,432 20	48,891 54
Solano -----	63,076 28	66,181 45	129,257 73
Sonoma -----	94,373 41	110,362 89	204,736 30
Stanislaus -----	42,171 06	47,447 12	89,621 18
Sutter -----	26,326 32	60,871 10	87,200 42
Tehama -----	22,756 20	29,672 13	52,428 33
Trinity -----	4,655 05	6,311 93	10,966 98
Tulare -----	38,595 20	35,751 49	74,346 69
Tuolumne -----	8,239 27	12,530 11	20,769 38
Ventura -----	16,443 71	23,298 48	39,742 19
Yolo -----	53,857 76	75,290 97	129,148 73
Yuba -----	27,546 62	31,230 70	58,777 32
Totals -----	\$3,311,724 98	\$4,189,748 31	\$7,501,473 29

RECEIPTS—Continued.

RECEIPTS.	27th Fiscal Year.	28th Fiscal Year.	Total.
Brought forward.....	\$3,311,724 98	\$4,189,748 31	\$7,501,473 29
<i>From other sources.</i>			
Clerk of Supreme Court.....	7,071 00	8,455 25	15,526 25
Secretary of State, fees in office.....	11,773 05	12,390 10	24,163 15
Secretary of State, sale of Codes.....	697 50	37 50	735 00
Secretary of State, sale of ballot paper.....	6,841 95	589 90	7,431 85
Secretary of State, sale of Geological Reports.....	90 00		90 00
Secretary of State, sale of Supreme Court Reports.....		54 00	54 00
Secretary of State, sale of Statutes of 1875-6.....		155 00	155 00
Secretary of State, sale of old carpet.....		30 00	30 00
Surveyor-General, fees in office.....	6,129 57	7,879 75	14,009 32
Register of State Land Office.....	708 50	2,975 75	3,684 25
Insurance Commissioner.....	8,495 01	12,495 21	20,990 22
Harbor Commissioners.....	253,322 63	305,903 09	559,225 72
Commissioner of Immigration.....	405 60	502 40	908 00
State Treasurer, interest on State bonds held in trust for School Fund.....	105,885 00	107,760 00	213,645 00
State Treasurer, interest on county bonds held in trust for School Fund.....		5,303 91	5,303 91
State Treasurer, interest on State bonds held in trust for University Fund.....	50,040 00	50,040 00	100,080 00
State Treasurer, to correct error on payment of interest to Thomas Findley.....		105 00	105 00
Coupon account, transferred to General Fund.....	980 00	122 50	1,102 50
Sale of tide lands.....	16,934 24	475 90	17,410 14
James A. Waymire, money refunded.....	750 00		750 00
J. J. Green, money refunded.....	1,549 20		1,549 20
L. H. Foote, money refunded.....	51 36		51 36
J. M. Montgomery, money refunded.....	500 00		500 00
W. B. C. Brown, money refunded.....		11 20	11 20
W. J. Curtis, money refunded.....		17 00	17 00
Regents State Unversity.....	245 70	133 60	379 30
Capitol Commissioners.....	214 75	251 00	465 75
State Board Tide Land Commissioners.....	23,410 35		23,410 35
William K. Squires, Administrator.....		1,063 29	1,063 29
Findley R. Dray, ex-Public Administrator.....		558 64	558 64
Totals.....	\$3,807,820 39	\$4,707,058 30	\$8,511,878 69
Balance on hand July 1st, 1875.....			1,105,878 98
Grand total.....			\$9,620,757 67

DISBURSEMENTS.

FOR WHAT PURPOSE.	27th Fiscal Year.	28th Fiscal Year.	Total.
Paid Controller's warrants.....	\$3,841,120 34	\$4,368,519 90	\$8,212,640 24
Balance in Treasury June 30th, 1877.....			1,108,117 43
Total.....			\$9,620,757 67

GENERAL FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$73,024 25	
From County Treasurers, twenty-seventh fiscal year	1,627,216 29	
From County Treasurers, twenty-eighth fiscal year	2,331,679 32	
From Clerk of Supreme Court, twenty-seventh fiscal year	5,303 80	
From Clerk of Supreme Court, twenty-eighth fiscal year	6,764 20	
From Secretary of State, twenty-seventh fiscal year	7,007 47	
From Secretary of State, twenty-eighth fiscal year	807 54	
From Surveyor-General, twenty-seventh fiscal year	3,147 00	
From Surveyor-General, twenty-eighth fiscal year	7,879 75	
From Register of State Land Office, twenty-seventh fiscal year	708 50	
From Register of State Land Office, twenty-eighth fiscal year	2,975 75	
From Insurance Commissioner, twenty-seventh fiscal year	8,495 01	
From Insurance Commissioner, twenty-eighth fiscal year	12,495 21	
From Commissioner of Immigration, twenty-seventh fiscal year	405 60	
From Commissioner of Immigration, twenty-eighth fiscal year	502 40	
From State Board Tide Land Commissioners, twenty-seventh fiscal year	23,410 35	
From sale of tide lands, twenty-seventh fiscal year	16,934 24	
From sale of tide lands, twenty-eighth fiscal year	475 90	
From James A. Waymire, twenty-seventh fiscal year	750 00	
From James J. Green, twenty-seventh fiscal year	1,549 20	
From J. M. Montgomery, twenty-seventh fiscal year	500 00	
From L. H. Foote, twenty-seventh fiscal year	51 36	
From W. B. C. Brown, twenty-eighth fiscal year	11 20	
From transfers from coupon account, twenty-seventh fiscal year	735 00	
From transfers from coupon account, twenty-eighth fiscal year	122 50	
From transfer from Folsom Branch Prison Fund, twenty-seventh fiscal year	85,494 73	
Paid Controller's warrants, twenty-seventh fiscal year		\$1,632,578 75
Paid Controller's warrants, twenty-eighth fiscal year		1,963,425 63
Transfer to Folsom Branch Prison Fund, twenty-seventh fiscal year		85,494 73
Transfer to Swamp Land Fund, twenty-eighth fiscal year		47,923 24
Transfer to Folsom Branch Prison Fund, twenty-eighth fiscal year		85,494 73
Balance on hand June 30th, 1877		403,529 49
Totals	\$4,218,446 57	\$4,218,446 57

SCHOOL FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$162,948 15	
From County Treasurers, twenty-seventh fiscal year	1,232,466 75	
From County Treasurers, twenty-eighth fiscal year	1,390,842 22	
From interest on State bonds, twenty-seventh fiscal year	105,885 00	
From interest on State bonds, twenty-eighth fiscal year	107,760 00	
From interest on county bonds, twenty-eighth fiscal year	5,303 91	
From Regents State University, twenty-seventh fiscal year	245 70	
From Regents State University, twenty-eighth fiscal year	133 60	
Paid Controller's warrants, twenty-seventh fiscal year		\$1,279,273 10
Paid Controller's warrants, twenty-eighth fiscal year		1,506,262 28
Balance on hand June 30th, 1877		220,049 95
Totals	\$3,005,585 33	\$3,005,585 33

INTEREST AND SINKING FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$604,690 94	-----
From County Treasurers, twenty-seventh fiscal year	340,223 96	-----
From County Treasurers, twenty-eighth fiscal year	332,077 02	-----
From F. Bachr, money refunded, twenty-seventh fiscal year	245 00	-----
From J. G. Estudillo, to correct error, twenty-eighth fiscal year	105 00	-----
Paid Controller's warrants, twenty-seventh fiscal year	-----	\$704,351 35
Paid Controller's warrants, twenty-eighth fiscal year	-----	323,679 50
Balance on hand June 30th, 1877	-----	249,311 07
Totals	\$1,277,341 92	\$1,277,341 92

STATE CAPITOL FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$7,514 93	-----
From County Treasurers, twenty-seventh fiscal year	1,770 87	-----
From County Treasurers, twenty-eighth fiscal year	914 05	-----
From Capitol Commissioners, twenty-seventh fiscal year	214 75	-----
From Capitol Commissioners, twenty-eighth fiscal year	251 00	-----
Paid Controller's warrants, twenty-seventh fiscal year	-----	\$8,411 65
Paid Controller's warrants, twenty-eighth fiscal year	-----	1,986 85
Balance on hand June 30th, 1877	-----	267 10
Totals	\$10,665 60	\$10,665 60

MILITARY FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$471 14	-----
From County Treasurers, twenty-seventh fiscal year	507 63	-----
From County Treasurers, twenty-eighth fiscal year	109 37	-----
Paid Controller's warrants, twenty-seventh fiscal year	-----	\$600 00
Paid Controller's warrants, twenty-eighth fiscal year	-----	378 77
Balance on hand June 30th, 1877	-----	109 37
Totals	\$1,088 14	\$1,088 14

STATE NORMAL SCHOOL BUILDING FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$10 24	-----
Balance on hand June 30th, 1877	-----	\$10 24
Totals	\$10 24	\$10 24

STATE SCHOOL LAND FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$31,274 37	
From County Treasurers, twenty-seventh fiscal year.....	101,221 25	
From County Treasurers, twenty-eighth fiscal year.....	93,814 54	
From W. J. Curtis, money refunded, twenty-eighth fiscal year.....	17 00	
Paid Controller's warrants, twenty-seventh fiscal year.....		\$7,637 04
Paid Controller's warrants, twenty-eighth fiscal year.....		148,741 34
Balance on hand June 30th, 1877.....		69,948 78
Totals.....	\$226,327 16	\$226,327 16

STATE UNIVERSITY FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$250 88	
From County Treasurers, twenty-seventh fiscal year.....	356 40	
From County Treasurers, twenty-eighth fiscal year.....	220 87	
From interest on bonds held in trust, twenty-seventh fiscal year.....	50,040 00	
From interest on bonds held in trust, twenty-eighth fiscal year.....	50,040 00	
Paid Controller's warrants, twenty-seventh fiscal year.....		\$50,290 88
Paid Controller's warrants, twenty-eighth fiscal year.....		50,040 00
Balance on hand June 30th, 1877.....		577 27
Totals.....	\$100,908 15	\$100,908 15

STATE LIBRARY FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$13,948 86	
From Secretary of State, twenty-seventh fiscal year.....	11,773 05	
From Secretary of State, twenty-eighth fiscal year.....	12,390 10	
From Surveyor-General, twenty-seventh fiscal year.....	2,982 57	
Paid Controller's warrants, twenty-seventh fiscal year.....		\$13,995 17
Paid Controller's warrants, twenty-eighth fiscal year.....		25,758 33
Balance on hand June 30th, 1877.....		1,341 08
Totals.....	\$41,094 58	\$41,094 58

SUPREME COURT LIBRARY FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$2,735 20	
From Clerk of the Supreme Court, twenty-seventh fiscal year.....	1,767 20	
From Clerk of the Supreme Court, twenty-eighth fiscal year.....	1,691 05	
Paid Controller's warrants, twenty-seventh fiscal year.....		\$1,260 00
Paid Controller's warrants, twenty-eighth fiscal year.....		1,806 05
Balance on hand June 30th, 1877.....		3,127 40
Totals.....	\$6,193 45	\$6,193 45

INSANE ASYLUM SPECIAL FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$24,474 25	
Balance on hand June 30th, 1877		\$24,474 25
Totals	\$24,474 25	\$24,474 25

SWAMP LAND FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$672 07	
Transfer from General Fund, twenty-eighth fiscal year	47,923 24	
Paid Controller's warrants, twenty-eighth fiscal year		\$10,273 72
Transfer to Swamp Land District No. 5, twenty-seventh fiscal year		672 07
Transfer to Swamp Land District No. 1, twenty-eighth fiscal year		8,127 89
Transfer to Swamp Land District No. 2, twenty-eighth fiscal year		5,846 69
Transfer to Swamp Land District No. 5, twenty-eighth fiscal year		13,784 18
Transfer to Swamp Land District No. 18, twenty-eighth fiscal year		7,744 31
Transfer to Swamp Land District No. 59, twenty-eighth fiscal year		463 09
Balance on hand June 30th, 1877		1,683 36
Totals	\$48,595 31	\$48,595 31

HARBOR PROTECTION FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$3,309 95	
Transfer to San Francisco Harbor Improvement Fund, twenty-seventh fiscal year		\$3,309 95
Totals	\$3,309 95	\$3,309 95

WAR BOND FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$8,814 65	
Paid Controller's orders, twenty-seventh fiscal year		\$77 31
Paid Controller's orders, twenty-eighth fiscal year		141 58
Balance on hand June 30th, 1877		8,595 76
Totals	\$8,814 65	\$8,814 65

WHARF AND DOCK FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$160,069 68	
From Harbor Commissioners, twenty-seventh fiscal year.....	192,771 50	
Paid Controller's warrants, twenty-seventh fiscal year.....		\$131,661 44
Transfer to San Francisco Harbor Improvement Fund, twenty-seventh fiscal year.....		221,179 74
Totals.....	\$352,841 18	\$352,841 18

ELECTION REWARD FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$620 37	
From Secretary of State, twenty-seventh fiscal year.....	621 98	
From Secretary of State, twenty-eighth fiscal year.....	58 86	
Paid Controller's warrants, twenty-seventh fiscal year.....		\$100 00
Balance on hand June 30th, 1877.....		1,201 21
Totals.....	\$1,301 21	\$1,301 21

SWAMP LAND DISTRICT No. 1.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$90 88	
Transfer from Swamp Land Fund, twenty-eighth fiscal year.....	8,127 89	
Paid Controller's warrants, twenty-eighth fiscal year.....		\$5,605 56
Balance on hand June 30th, 1877.....		2,613 21
Totals.....	\$8,218 77	\$8,218 77

SWAMP LAND DISTRICT No. 2.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$36 15	
Transfer from Swamp Land Fund, twenty-eighth fiscal year.....	5,846 69	
Paid Controller's warrants, twenty-eighth fiscal year.....		\$4,785 57
Balance on hand June 30th, 1877.....		1,097 27
Totals.....	\$5,882 84	\$5,882 84

SWAMP LAND DISTRICT No. 5.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$1,463 08	
From County Treasurers, twenty-seventh fiscal year	310 56	
From County Treasurers, twenty-eighth fiscal year	28 32	
Transfer from Swamp Land Fund, twenty-seventh fiscal year	672 07	
Transfer from Swamp Land Fund, twenty-eighth fiscal year	13,784 18	
Paid Controller's warrants, twenty-seventh fiscal year		\$459 00
Paid Controller's warrants, twenty-eighth fiscal year		15,239 23
Balance on hand June 30th, 1877		559 98
Totals	\$16,258 21	\$16,258 21

SWAMP LAND DISTRICT No. 8.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$60 40	
Transfer to Swamp Land District No. 46, twenty-seventh fiscal year		\$60 40
Totals	\$60 40	\$60 40

SWAMP LAND DISTRICT No. 17.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$8 00	
Balance on hand June 30, 1877		\$8 00
Totals	\$8 00	\$8 00

SWAMP LAND DISTRICT No. 18.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$1,819 20	
From County Treasurers, twenty-seventh fiscal year	5,856 66	
From County Treasurers, twenty-eighth fiscal year	177 34	
Discount on warrants redeemed by Treasurer of Yolo County, and paid in as cash in his semi-annual settlement, made January, 1876, as per Act of March 23, 1874	2 92	
Discount on warrants redeemed by Treasurer of Yolo County, and paid in as cash in his semi-annual settlement, made February, 1877, as per Act of March 23, 1874	13 66	
Transfer from Swamp Land Fund, twenty-eighth fiscal year	7,744 31	
Paid Controller's warrants, twenty-seventh fiscal year		\$4,318 29
Paid Controller's warrants, twenty-eighth fiscal year		10,761 08
Balance on hand June 30th, 1877		534 72
Totals	\$15,614 09	\$15,614 09

SWAMP LAND DISTRICT No. 38.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$66 60	
Paid Controller's warrants, twenty-eighth fiscal year.....		\$66 60
Totals	\$66 60	\$66 60

SWAMP LAND DISTRICT No. 41.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	44	
Balance on hand June 30th, 1877.....		44
Totals	44	44

SWAMP LAND DISTRICT No. 45.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$9 85	
Balance on hand June 30th, 1877.....		\$9 85
Totals	\$9 85	\$9 85

SWAMP LAND DISTRICT No. 46.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$152 59	
Transfer from Swamp Land District No. 8, twenty-seventh fiscal year.....	60 40	
Paid Controller's warrants, twenty-seventh fiscal year.....		\$207 75
Balance on hand June 30th, 1877.....		5 24
Totals	\$212 99	\$212 99

SWAMP LAND DISTRICT No. 49.

	Receipts.	Payments.
July 1st, 1875—Balance on hand.....	\$18 70	
Balance on hand June 30th, 1877.....		\$18 70
Totals	\$18 70	\$18 70

SWAMP LAND DISTRICT NO. 51.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$34 08	-----
Balance on hand June 30th, 1877	-----	\$34 08
Totals	\$34 08	\$34 08

SWAMP LAND DISTRICT NO. 59.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$27 29	-----
Transfer from Swamp Land Fund, twenty-seventh fiscal year	463 09	-----
Paid Controller's warrants, twenty-eighth fiscal year	-----	\$100 00
Balance on hand June 30th, 1877	-----	390 38
Totals	\$490 38	\$490 38

ESTATES DECEASED PERSONS' FUND.

	Receipts.	Payments.
July 1st, 1875—Balance on hand	\$7,255 52	-----
From County Treasurers, twenty-seventh fiscal year	616 67	-----
From County Treasurers, twenty-eighth fiscal year	6,581 37	-----
From Wm. K. Squires, Administrator estate of Henry Curtis, deceased, twenty-eighth fiscal year	1,063 29	-----
From Findley R. Dray, ex-Public Administrator of Sacramento County, twenty-eighth fiscal year	558 64	-----
Paid Controller's warrants, twenty-seventh fiscal year	-----	\$141 05
Paid Controller's warrants, twenty-eighth fiscal year	-----	679 60
Balance on hand June 30th, 1877	-----	15,254 84
Totals	\$16,075 49	\$16,075 49

FOLSOM BRANCH PRISON FUND.

	Receipts.	Payments.
Transfer from General Fund, twenty-seventh fiscal year	\$85,494 73	-----
Transfer to General Fund, twenty-seventh fiscal year	-----	\$85,494 73
Transfer from General Fund, twenty-eighth fiscal year	85,494 73	-----
Balance on hand June 30th, 1877	-----	85,494 73
Totals	\$170,989 46	\$170,989 46

INTEREST AND SINKING FUND OF RECLAMATION DISTRICT NO. 5.

	Receipts.	Payments.
July 1st, 1875—Balance on hand -----	\$1 02	-----
From Treasurer Sutter County, twenty-seventh fiscal year -----	1,177 94	-----
From Treasurer Sutter County, twenty-eighth fiscal year -----	32,676 69	-----
Paid Controller's warrants to pay coupons, twenty-seventh fiscal year -----		\$1,160 00
Paid Controller's warrants to pay coupons, twenty-eighth fiscal year -----		32,680 00
Balance on hand June 30th, 1877 -----		15 65
Totals -----	\$33,855 65	\$33,855 65

SAN FRANCISCO HARBOR IMPROVEMENT FUND.

	Receipts.	Payments.
Transfer from Wharf and Dock Fund, twenty-seventh fiscal year -----	\$221,179 74	-----
Transfer from Harbor Protection Fund, twenty-seventh fiscal year -----	3,309 95	-----
From Harbor Commissioners, twenty-seventh fiscal year -----	60,551 13	-----
From Harbor Commissioners, twenty-eighth fiscal year -----	305,903 09	-----
Paid Controller's warrants, twenty-seventh fiscal year -----		\$7,595 23
Paid Controller's warrants, twenty-eighth fiscal year -----		266,121 87
Balance on hand June 30th, 1877 -----		317,226 81
Totals -----	\$590,943 91	\$590,943 91

UNIVERSITY ENDOWMENT FUND.

	Receipts.	Payments.
From County Treasurers, twenty-eighth fiscal year -----	\$627 20	-----
Balance on hand June 30th, 1877 -----		\$627 20
Totals -----	\$627 20	\$627 20

RECAPITULATION.

Balance in each Fund, June 30th, 1877.

Fund.	Amount.
General Fund	\$403,529 49
School Fund	220,049 95
Interest and Sinking Fund	249,311 07
State Capitol Fund	267 10
Military Fund	109 37
State Normal School Building Fund	10 24
State School Land Fund	69,948 78
State University Fund	577 27
State Library Fund	1,341 08
Supreme Court Library Fund	3,127 40
Insane Asylum Special Fund	24,474 25
Swamp Land Fund	1,683 36
War Bond Fund	8,595 76
Election Reward Fund	1,201 21
Swamp Land District No. 1	2,613 21
Swamp Land District No. 2	1,097 27
Swamp Land District No. 5	559 98
Swamp Land District No. 17	8 00
Swamp Land District No. 18	534 72
Swamp Land District No. 41	44
Swamp Land District No. 45	9 85
Swamp Land District No. 46	5 24
Swamp Land District No. 49	18 70
Swamp Land District No. 51	34 08
Swamp Land District No. 59	390 38
Estates Deceased Persons' Fund	15,254 84
Folsom Branch Prison Fund	85,494 73
Swamp Land District No. 5 Sinking and Interest Fund	15 65
San Francisco Harbor Improvement Fund	317,226 81
University Endowment Fund	627 20
Total	\$1,408,117 43

TRANSACTIONS IN STATE BONDS.

BONDS.	Amount.	Amount.
<i>Funded debt of 1857, seven per cent. bonds.</i>		
Outstanding July 1st, 1875, as per ex-Treasurer Baehr's report		\$170,500 00
*Error in not deducting Bond No. 150, paid April 10th, 1869	\$1,000 00	
†Error in not deducting bonds paid during the twenty-fifth and twenty-sixth fiscal years	8,000 00	
		9,000 00
Actual balance outstanding July 1st, 1875		\$161,500 00
Redeemed during the twenty-seventh and twenty-eighth fiscal years		148,500 00
Outstanding June 30th, 1877		\$13,000 00
<i>Funded debt of 1860, seven per cent. bonds.</i>		
Outstanding July 1st, 1875	\$87,500 00	
Redeemed	86,000 00	
Outstanding June 30th, 1877		\$1,500 00
<i>Soldiers' relief seven per cent. bonds.</i>		
Outstanding July 1st, 1875	\$95,500 00	
Outstanding June 30th, 1877		\$95,500 00
<i>State Capitol bonds of 1870.</i>		
Outstanding July 1st, 1875	\$250,000 00	
Outstanding June 30th, 1877		\$250,000 00
<i>State Capitol bonds of 1872.</i>		
Outstanding July 1st, 1875	\$250,000 00	
Outstanding June 30th, 1877		\$250,000 00
<i>Funded debt of 1873, six per cent. bonds.</i>		
Outstanding July 1st, 1875	\$2,801,000 00	
Outstanding June 30th, 1877		\$2,801,000 00

*Bond No. 150 was paid by ex-Treasurer Colonel April 10th, 1869, under altered number of 330, and left uncanceled.

†After examining and comparing vouchers in the Controller's and Treasurer's offices, I find that the true amount of bonds redeemed of the issue of 1857, during the twenty-fifth and twenty-sixth fiscal years, was \$1,425,000, or \$8,000 more than the amount reported by my predecessor.

REMARKS.—The bonds of 1857 and 1860 were all called in March 1st, 1875, and they have been no longer interest-bearing since July 1st, 1875.

BONDS HELD IN TRUST FOR STATE SCHOOL FUND.

Bonds.	Amount.
State Capitol bonds of 1870, seven per cent.	\$236,000 00
State Capitol bonds of 1872, seven per cent.	115,000 00
Funded debt of 1873, six per cent.	1,386,500 00
Santa Barbara County bonds, ten per cent.	20,000 00
San Joaquin County bonds, ten per cent.	5,000 00
San Luis Obispo County bonds, ten per cent.	10,000 00
San Luis Obispo County bonds, eight per cent.	10,000 00
Humboldt County bonds, nine per cent.	25,000 00
Tulare County bonds, ten per cent.	20,000 00
Tehama County bonds, eight per cent.	11,500 00
Mendocino County bonds, eight per cent.	10,000 00
Lake County bonds, seven per cent.	11,400 00
Total	\$1,860,400 00

BONDS HELD IN TRUST FOR STATE UNIVERSITY FUND.

Bonds.	Amount.
State Capitol bonds of 1872, seven per cent.	\$135,000 00
Funded debt of 1873, six per cent.	676,500 00
Total	\$811,500 00

STATE DEBT AND ASSETS JUNE 30TH, 1877.

	Amount.	Total.
<i>Debt.</i>		
Outstanding bonds of 1857, seven per cent.	\$13,000 00	
Outstanding bonds of 1860, seven per cent.	1,500 00	
Outstanding Soldiers' Relief Bonds, seven per cent.	95,500 00	
Outstanding Capitol Bonds of 1870, seven per cent.	250,000 00	
Outstanding Capitol Bonds of 1872, seven per cent.	250,000 00	
Outstanding Funded Debt Bonds of 1873, six per cent.	\$2,801,000 00	
Total bonds outstanding		\$3,411,000 00
Outstanding Controller's warrants—General Fund	\$73,140 75	
Outstanding warrants—State School Land Fund	1,884 62	
Outstanding Controller's warrants—Swamp Land Fund	1,683 36	
Total warrants outstanding		76,708 73
Total debt June 30th, 1877		\$3,487,708 73
<i>Assets in State Treasury June 30th, 1877.</i>		
Bonds held in trust for School Fund	\$1,860,400 00	
Bonds held in trust for University Fund	811,500 00	
Cash on hand—Gold coin	1,230,392 50	
Silver coin	168,345 12	
United States legal tenders	9,379 51	
Total		\$4,080,017 43

NOTE.—The greatest portion of the silver on hand belongs to the San Francisco Harbor Improvement Fund.

INTEREST AND COUPON ACCOUNT.

BONDS.	Balance on hand July 1st, 1875	Receipts	Payments	Transferred to (General Fund)	Balance on hand June 30, 1877
<i>Bonds of 1857.</i>					
Coupon No. 32	\$630 00		\$105 00	\$525 00	
Coupon No. 33		\$210 00	175 00	35 00	
Coupon No. 34		4,865 00	4,847 50	17 50	
<i>Bonds of 1860.</i>					
Coupon No. 26	17 50			17 50	
Coupon No. 27	35 00		17 50	17 50	
Coupon No. 28		3,062 50	3,010 00	52 50	
<i>Pacific Railroad Bonds.</i>					
Coupon No. 20	245 00		70 00	175 00	
Coupon No. 21	630 00		560 00		\$70 00
Coupon No. 22		52,500 00	52,360 00		140 00
Coupon No. 23		52,500 00	52,360 00		140 00
Coupon No. 24		52,500 00	52,395 00		105 00
Coupon No. 25		52,500 00	50,995 00		1,505 00
Coupon No. 26		52,500 00			52,500 00
<i>State Capitol Bonds of 1870.</i>					
Coupon No. 10		8,750 00	8,750 00		
Coupon No. 11		8,750 00	8,750 00		
Coupon No. 12		8,750 00	8,750 00		
Coupon No. 13		8,750 00	8,750 00		
Coupon No. 14		8,750 00			8,750 00
<i>State Capitol Bonds of 1872.</i>					
Coupon No. 6		8,750 00	8,750 00		
Coupon No. 7		8,750 00	8,750 00		
Coupon No. 8		8,750 00	8,750 00		
Coupon No. 9		8,750 00	8,750 00		
Coupon No. 10		8,750 00			8,750 00
<i>Soldiers' Relief Bonds.</i>					
Coupon No. 21	17 50			17 50	
Coupon No. 22	17 50		17 50		
Coupon No. 23		3,342 50	3,342 50		
Coupon No. 24		3,342 50	3,342 50		
Coupon No. 25		3,342 50	3,325 00		17 50
Coupon No. 26		3,342 50	3,325 00		17 50
Coupon No. 27		3,342 50			3,342 50
<i>Funded Debt of 1873.</i>					
Coupon No. 4	30 00		30 00		
Coupon No. 5		80,415 00	80,415 00		
Coupon No. 6		84,030 00	84,030 00		
Coupon No. 7		84,030 00	84,030 00		
Coupon No. 8		84,030 00	83,850 00		180 00
Coupon No. 9		84,030 00			84,030 00
<i>Swamp Land Dist. No. 5 Bonds.</i>					
Coupons Nos. 5, 6, 7, 8, 9	1 02	33,854 63	33,840 00		15 65
Totals	\$1,623 52	\$825,239 63	\$666,442 50	\$857 50	\$159,563 15

STATE OF CALIFORNIA, }
 County of Sacramento, } ss.

I, JOSÉ G. ESTUDILLO, Treasurer of the State of California, do hereby certify that the balance of the appropriation for postage, and expressage, for the Treasurer's office, for the twenty-sixth fiscal year, seventy-five dollars, and also the appropriation for the twenty-seventh fiscal year, for postage, one hundred and fifty dollars, have all been expended for postage, rent of post-office box, subscription to newspapers, telegraphing, ice, purchase of and washing of towels, and other necessary expenses of the office.

JOSÉ G. ESTUDILLO.

Sworn and subscribed to before me this thirtieth day of July, A. D. eighteen hundred and seventy-seven.

[SEAL.]

JOHN P. POOLE,
 Deputy Clerk Supreme Court.

BIENNIAL REPORT

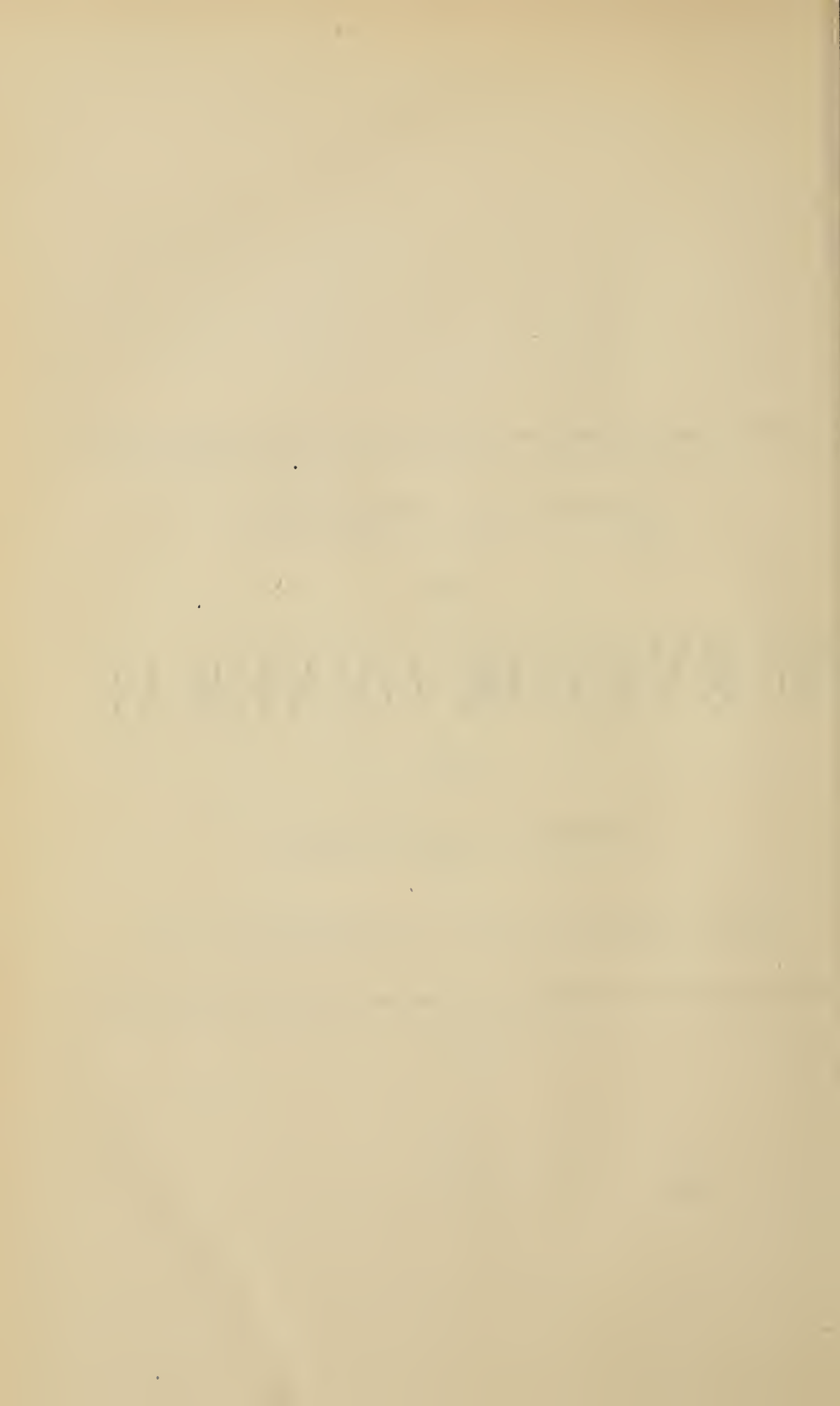
OF THE

SURVEYOR-GENERAL

OF THE

STATE OF CALIFORNIA,

FROM AUGUST 1st, 1875 TO AUGUST 1st, 1877.



REPORT.

STATE OF CALIFORNIA, OFFICE OF SURVEYOR-GENERAL, }
SACRAMENTO, August 1st, 1877. }

To His Excellency,
WILLIAM IRWIN,
Governor of California:

DEAR SIR: In accordance with the requirements of section four hundred and eighty-three of the Political Code, concerning the office of Surveyor-General, I have the honor to submit the following report of the transactions of this office from August first, eighteen hundred and seventy-five, to August first, eighteen hundred and seventy-seven.

WM. MINIS,
Surveyor-General, and ex officio Register of the State Land Office.

AREA OF THE STATE OF CALIFORNIA.

According to information obtained from the United States Surveyor-General, the area of the State of California is one hundred million five hundred thousand acres, apportioned as follows:

	Acres.
Agricultural and mineral lands surveyed to June 30th, 1877	45,644,974
Agricultural and mineral lands unsurveyed	42,655,918
Private grants surveyed to June 30th, 1877	8,327,000
Mission Church property	40,707
Pueblo lands	201,835
Private grants unsurveyed	59,400
Indian and military reservations	212,715
Lakes, islands, bays, and navigable rivers	1,531,700
Swamp and overflowed lands surveyed	1,584,692
Swamp and overflowed lands unsurveyed	136,059
Salt marsh and tide lands around San Francisco Bay	100,000
Salt marsh and tide lands around Humboldt Bay	5,000
Aggregate area	100,500,000

GRANT OF FIVE HUNDRED THOUSAND ACRES.

This is a grant for the purpose of internal improvement, and is held by the State under the eighth section of the Act of Congress of September fourth, eighteen hundred and forty-one.

There have been listed to this State, under this grant, during the two years ending August first, eighteen hundred and seventy-seven, thirteen thousand two hundred and thirty-four and fifty-seven one-hundredths ($13,234\frac{57}{100}$) acres.

The whole amount listed to this State under this grant is four hundred and seventy-one thousand seven hundred and sixteen and fifty-six one-hundredths ($471,716\frac{56}{100}$) acres.

GRANT OF SWAMP AND OVERFLOWED LANDS.

These lands are held by the State under the fourth section of the Act of Congress of September twenty-eighth, eighteen hundred and fifty.

Of these lands, twenty-five thousand four hundred and seventy-four and forty-five one-hundredths ($25,474\frac{45}{100}$) acres have been listed to the State during the two years ending August first, eighteen hundred and seventy-seven.

The whole amount listed to the State under this grant is one million five hundred and thirty-two thousand one hundred and thirty-six and sixty-nine one-hundredths ($1,532,136\frac{69}{100}$) acres.

GRANT OF SIXTEENTH AND THIRTY-SIXTH SECTIONS, AND LANDS IN LIEU THEREOF.

These lands are held by the State under the sixth section of the Act of Congress of March third, eighteen hundred and fifty-three (1853).

There have been granted to the State, in lieu of the sixteenth and thirty-sixth sections, during the last two years, thirty-one thousand one hundred and fifty-four and nine one-hundredths ($31,154\frac{9}{100}$) acres.

The whole amount listed to the State, in lieu of the sixteenth and thirty-sixth sections, is six hundred and ten thousand six hundred and fifty-six and sixty-seven one-hundredths ($610,656\frac{67}{100}$) acres.

GRANT OF SEVENTY-TWO SECTIONS.

This is a grant for the use of a Seminary of Learning, and is held by the State under the twelfth section of the Act of Congress of March third, eighteen hundred and fifty-three (1853).

The whole amount listed to the State under this grant is forty thousand four hundred and forty-five and six one-hundredths ($40,445\frac{6}{100}$) acres.

GRANT OF ONE HUNDRED AND FIFTY THOUSAND ACRES.

This is a grant for the benefit of agriculture and the mechanic arts, held by the State under the Act of Congress of July second, eighteen hundred and sixty-two, and Acts amendatory thereof.

During the last two years there have been listed to the State under this grant, twenty-one thousand three hundred and thirty-nine and forty-six one-hundredths ($21,339\frac{46}{100}$) acres.

The whole amount listed to the State under this grant is one hundred and fourteen thousand three hundred and forty-five and sixty-two one-hundredths ($114,345\frac{62}{100}$) acres.

GRANT OF TEN SECTIONS.

This is a grant for the purpose of the erection of public buildings, held by the State under the thirteenth section of the Act of Congress of March third, eighteen hundred and fifty-three.

The whole amount listed to the State under this grant is three thousand three hundred and sixty-three and eighty one-hundredths ($3,363 \frac{80}{100}$) acres.

SALT MARSH AND TIDE LANDS.

These lands are held by the State by virtue of her sovereignty.

Statement of fees collected by the Surveyor-General from December 6th, 1875, up to August 1st, 1877.

Amount collected up to March 1st, 1876	\$3,858 50	
Amount collected from March 1st, 1876, up to August 1st, 1877	12,439 00	
	<hr/>	\$16,297 50
Amount paid into State treasury	\$12,439 00	
Amount disbursed for extra clerk hire, maps, books, expressage, and postage	2,045 85	
	<hr/>	14,484 85
Balance on hand		<hr/> \$1,812 65

Statement of fees collected by the Register of the State Land Office from December 6th, 1875, to August 1st, 1877.

Amount collected up to March 1st, 1876	\$1,744 00	
Amount collected from March 1st, 1876, up to August 1st, 1877	4,403 75	
	<hr/>	\$6,147 75
Amount paid into the State treasury	4,403 75	
Amount disbursed for extra clerk hire and pens	78 00	
	<hr/>	\$4,481 75
Balance on hand		<hr/> \$1,666 00

From December sixth, eighteen hundred and seventy-five, to August first, eighteen hundred and seventy-seven, I have collected for and paid to the Secretary of State, two thousand nine hundred and eighty-eight dollars as fees on patents, of which sum ninety-nine dollars was delivered to me by my predecessor in office.

GENERAL OFFICE BUSINESS.

From August first, eighteen hundred and seventy-five, the date of the last report from this office, to December sixth, eighteen hundred and seventy-five, the commencement of my term, the following number of certificates of purchase and patents have been issued:

PATENTS ISSUED.	No.	Acres.
Salt marsh and tide lands	4	239.15
Swamp and overflowed lands	140	43,888.15
School lands	177	39,954.79
Totals	<hr/> 321	<hr/> 84,082.09

CERTIFICATES OF PURCHASE ISSUED.	No.	Acres.
Grant of 16th and 36th sections	263	57,346.25
Grant of 500,000 acres	2	960.00
Swamp and overflowed lands	34	8,864.39
Salt marsh and tide lands	3	295.57
Totals	302	67,466.21

Since December sixth, eighteen hundred and seventy-five, the commencement of my term of office, up to August first, eighteen hundred and seventy-seven, I have issued patents for four hundred and thirteen thousand five hundred and one and eighty-three one-hundredths ($413,501 \frac{83}{100}$) acres; certificates of purchase for two hundred and forty-four thousand three hundred and ninety and sixteen one-hundredths ($244,390 \frac{16}{100}$) acres; and approved applications to the number of one thousand five hundred and twenty-two (1,522), all of which will more fully appear in the following statement:

PATENTS ISSUED.	No.	Acres.
Swamp and overflowed lands	281	268,852.08
Salt marsh and tide lands	19	7,419.90
Grants of 16th and 36th sections and 500,000 acres	528	137,229.85
Totals	828	413,501.83

CERTIFICATES OF PURCHASE ISSUED.	No.	Acres.
Grant of 16th and 36th sections	648	138,070.18
School Warrant locations	9	2,880.00
Grant of 500,000 acres	5	9,681.61
Tide land locations	17	7,345.19
Tide land surveys	1	47.81
Swamp and overflowed land surveys	23	19,094.03
Swamp and overflowed land locations	210	67,271.34
Totals	913	244,390.16

APPLICATIONS APPROVED.	No.	
Grant of 16th and 36th sections	1,274	-----
Grant of 500,000 acres	4	-----
Warrant locations	9	-----
Tide land locations	18	-----
Swamp land locations	199	-----
Swamp land surveys	18	-----
Total	1,522	-----

DELINQUENT PURCHASERS.

In compliance with the requirement of section three thousand five hundred and forty-six of the Political Code, I did, on the first day of May, eighteen hundred and seventy-six, forward to the District Attorneys of the various counties of the State, statements showing the names of purchasers, the numbers and dates of surveys or locations, the numbers and dates of the certificates of purchase, the amount paid, the amount unpaid, and the amount then due on all locations on which the purchasers had failed to make payment as required by law.

These statements embraced in the aggregate one thousand three hundred and twenty-five (1,325) locations, of which, up to the present time, only three hundred and seventeen have been reported to me as having been annulled.

COUNTY BOUNDARIES.

On the sixteenth of March, eighteen hundred and seventy-six, at the request of the Board of Supervisors of San Diego County, John M. Baldwin was appointed to run the boundary line between the County of San Diego and the Counties of Los Angeles and San Bernardino.

No plat or field notes of this survey have yet been returned to this office.

On the twelfth of May, eighteen hundred and seventy-six, at the request of the Board of Supervisors of Mono County, J. G. Thompson was appointed to run the line between the Counties of Mono and Inyo.

The map and field notes of this survey were filed in this office on the sixteenth of September, eighteen hundred and seventy-six, and the survey was approved on October tenth, eighteen hundred and seventy-six.

On the fourteenth of February, eighteen hundred and seventy-seven, at the request of the Board of Supervisors of Sonoma County, Captain John F. Kingsbury was appointed to run the line between the Counties of Sonoma and Napa.

The map and field notes of this survey were filed in this office on July tenth, eighteen hundred and seventy-seven, and the survey was approved August thirteenth, eighteen hundred and seventy-seven.

No other boundary surveys have been made during my term under instructions from this office.

RECLAMATION OF SWAMP AND OVERFLOWED LANDS.

It is only since the passage of the Act of eighteen hundred and sixty-eight, providing for the sale and management of lands belonging to the State, that any record of the organization of swamp land reclamation districts has been kept in this office. The formation of reclamation districts is subject to the control of the Boards of County Supervisors of the counties in which the lands are situated. The Register of the State Land Office is furnished by the County Recorder with a copy of the petition for the formation of the district, after the same has been approved by the Board of Supervisors. The Register is required to fix the number of the district, retaining the original

number in cases where old districts are reorganized under the present law.

Under the provisions of sections three thousand four hundred and seventy-six and three thousand four hundred and seventy-seven of the Political Code, as amended, when works of reclamation in any swamp land district have been completed, or upon the expenditure of two dollars per acre on the same, each purchaser within the district shall be given credit for full payment of the balance due the State, and shall be entitled to receive a patent for his land.

The Register of the State Land Office is required to prepare a statement, showing the name of each purchaser in the district, and the amount paid by him as purchase money or interest. This statement is to be forwarded to the County Treasurer of the proper county, who is to make a pro rata distribution of the money thus paid, and belonging to the district, among said purchasers, after deducting the amounts chargeable against the lands in said district.

The total number of swamp land districts organized and reported to this office up to August first, eighteen hundred and seventy-seven, is two hundred and forty-four, and they are numbered and located as follows:

Number of District	COUNTY.	Number of District	COUNTY.
67	Colusa.	105	Solano.
68	Sutter.	106	Contra Costa.
69	Sutter.	107	Contra Costa.
70	Sutter.	108	Yolo.
71	Sacramento.	109	San Joaquin.
72	San Joaquin.	110	San Joaquin.
73	Sacramento.	111	Kern.
74	Sacramento.	112	Contra Costa.
75	Sacramento.	113	Merced.
76	Sacramento.	114	Marin.
77	Colusa.	115	Colusa.
78	Tulare.	116	Kern.
79	Fresno.	117	Sacramento.
80	Fresno.	118	Contra Costa.
81	Tulare.	119	Lassen.
82	Alameda.	120	Kern.
83	San Joaquin.	121	Kern.
84	Solano.	122	Merced.
85	San Joaquin.	123	Solano.
86	Merced.	124	Colusa.
87	Colusa.	125	Fresno.
88	Fresno.	126	Solano.
89	Sacramento.	61	San Joaquin.
90	Colusa.	127	Solano.
91	Colusa.	128	Colusa.
92	Colusa.	129	Sacramento.
93	Colusa.	130	San Joaquin.
94	Colusa.	131	Merced.
95	Santa Clara.	132	Merced.
96	Lake.	133	Fresno.
97	Lake.	134	Napa.
98	Fresno.	135	Tulare.
99	Contra Costa.	136	Sacramento.
100	Contra Costa.	137	Solano.
101	Contra Costa.	138	Contra Costa.
102	Contra Costa.	139	Merced.
103	Contra Costa.	140	San Joaquin.
104	Solano.	57	San Joaquin.

Number of District	COUNTY.	Number of District	COUNTY.
141	Yolo.	200	Tehama.
142	Sacramento.	201	Tehama.
41	Solano.	202	Sonoma.
143	San Diego.	203	Sacramento.
144	San Joaquin.	204	Sonoma.
145	Solano.	205	Sacramento.
146	Yolo.	206	Colusa.
147	Yolo.	207	Plumas.
148	Sacramento.	208	Kern.
149	Sacramento.	209	San Joaquin.
150	Yolo.	210	San Joaquin.
151	Contra Costa.	211	Plumas.
152	Tulare.	212	Plumas.
153	Tulare.	213	Sacramento.
154	Tulare.	214	Humboldt.
155	Tulare.	215	Sacramento.
156	Tulare.	216	Tulare.
157	San Joaquin.	217	Solano.
158	Tulare.	218	Solano.
159	Tulare.	219	Tehama.
53	San Joaquin.	220	Colusa.
160	Contra Costa.	221	San Joaquin.
161	Contra Costa.	222	Plumas.
162	San Joaquin.	223	San Joaquin.
72	San Joaquin.	224	Colusa.
163	San Joaquin.	225	Sutter.
164	Contra Costa.	226	Tulare.
165	Contra Costa.	227	Tulare.
166	Contra Costa.	228	Tulare.
167	Tulare.	229	Tulare.
168	Tulare.	230	Tulare.
63	San Joaquin.	231	Tulare.
169	San Joaquin.	232	Tulare.
1	Contra Costa.	233	Tulare.
170	Tulare.	234	Tulare.
171	Plumas.	235	Tulare.
172	Plumas.	236	Tulare.
173	Plumas.	237	Tulare.
174	Contra Costa.	238	Tulare.
175	Sacramento.	239	Tulare.
176	Contra Costa.	240	Tulare.
150	Yolo (reorganized).	241	Tulare.
178	Plumas.	242	Tulare.
179	Tulare.	243	Inyo.
180	Tulare.	244	Inyo.
181	Tulare.	245	Inyo.
182	Tulare.	246	Sonoma.
183	Contra Costa.	247	Sonoma.
58	San Joaquin.	248	Tulare.
184	Kern.	249	Tulare.
185	Kern.	250	Tulare.
186	Solano.	251	Tulare.
187	Solano.	252	Sacramento.
188	Solano.	253	Colusa.
189	San Joaquin.	254	Sacramento.
190	San Joaquin.	255	Lassen.
191	Plumas.	256	Solano.
192	Plumas.	257	Sacramento.
193	Plumas.	258	Solano.
194	Plumas.	259	Plumas.
195	Lassen.	260	Tulare.
196	Solano.	261	Tulare.
197	Tehama.	262	Tulare.
198	Tehama.	263	Tulare.
199	Tehama.	264	Tulare.

Number of District	COUNTY.	Number of District	COUNTY.
265	Tulare.	284	Lassen.
266	Kern.	285	Lassen.
267	Lassen.	286	Sacramento.
268	Plumas.	287	Sacramento.
269	Fresno.	288	Plumas.
270	Plumas.	289	Plumas.
271	Merced.	290	Plumas.
272	Lassen.	291	Solano.
273	Shasta.	292	Plumas.
274	Sacramento.	293	Solano.
275	Colusa.	1	Lake.
276	Solano.	294	Solano.
45	Tulare.	295	Lassen.
277	Fresno.	296	Lassen.
278	Plumas.	297	Plumas.
279	Tulare.	298	Plumas.
280	Plumas.	299	Tulare.
281	Plumas.	300	Tulare.
282	San Joaquin.	301	Tulare.
283	Modoc.		

Since August first, eighteen hundred and seventy-five, the date of last report from this office, and up to December sixth, eighteen hundred and seventy-five, the commencement of my term, twenty (20) Swamp Land Districts were organized, and reported to the State Land Office, as follows :

Number of District	COUNTY.	Number of District	COUNTY.
247	Sonoma.	265	Tulare.
248	Tulare.	252	Sacramento.
249	Tulare.	254	Sacramento.
250	Tulare.	257	Sacramento.
251	Tulare.	253	Colusa.
260	Tulare.	255	Lassen.
261	Tulare.	256	Solano.
262	Tulare.	258	Solano.
263	Tulare.	259	Plumas.
264	Tulare.	266	Kern.

Since December sixth, eighteen hundred and seventy-five, and up to August first, eighteen hundred and seventy-seven, thirty-seven (37) Swamp Land Districts have been organized, and reported to me, as follows :

Number of District	COUNTY.	Number of District	COUNTY.
267	Lassen.	269	Fresno.
272	Lassen.	277	Fresno.
284	Lassen.	271	Merced.
285	Lassen.	273	Shasta.
295	Lassen.	274	Sacramento.
296	Lassen.	286	Sacramento.
268	Plumas.	287	Sacramento.
270	Plumas.	275	Colusa.
278	Plumas.	276	Solano.
280	Plumas.	291	Solano.
281	Plumas.	293	Solano.
288	Plumas.	294	Solano.
289	Plumas.	45	Tulare.
290	Plumas.	279	Tulare.
292	Plumas.	299	Tulare.
297	Plumas.	300	Tulare.
298	Plumas.	301	Tulare.
283	Modoc.	282	San Joaquin.
1	Lake.		

From the report of August first, eighteen hundred and seventy-five, made by my predecessor in office, it appears that up to that date the following described districts were finally acted on in pursuance of the law concerning the expenditure of two dollars per acre, or complete reclamation :

No. of District	COUNTY.	Area	Am't of purchase money reported to County Treasurers	Remarks.
107	Contra Costa	21,000.00	\$8,921 15	Two dollars per acre expended.
118	Contra Costa and Alameda	11,440.00	6,001 83	Two dollars per acre expended.
101	Contra Costa	2,594.00	2,744 55	Two dollars per acre expended.
164	Contra Costa	661.73	429 69	Two dollars per acre expended.
165	Contra Costa	321.07	342 20	Two dollars per acre expended.
174	Contra Costa	1,783.91	776 09	Two dollars per acre expended.
183	Contra Costa	2,107.00	1,239 26	Reclamation complete.
176	Contra Costa and Sacramento	899.44	1,131 90	Two dollars per acre expended.
124	Colusa	20,060.00	3,071 27	Two dollars per acre expended.
108	Colusa and Yolo	74,085.87	18,890 52	Two dollars per acre expended.
67	Colusa	5,640.00	4,143 48	Reclamation complete.
93	Colusa	23,440.00	5,631 30	Reclamation complete.
133	Fresno	920.00	943 30	Reclamation complete.
80	Fresno and Tulare	8,160.00	9,669 19	Reclamation complete.
214	Humboldt	174.93	not ascertain'd.	Two dollars per acre expended.
111	Kern	29,480.00	4,413 46	Two dollars per acre expended.
119	Lassen	400.00	122 79	Two dollars per acre expended.
114	Marin	5,620.00	2,511 28	Two dollars per acre expended.
171	Plumas	881.70	332 16	Reclamation complete.
191	Plumas	120.00	34 40	Reclamation complete.
212	Plumas	120.00	35 84	Reclamation complete.
207	Plumas	400.00	107 50	Reclamation complete.
172	Plumas	1,552.28	420 44	Reclamation complete.
Carried forward		211,861.93	\$72,241 60	

No. of District.	COUNTY.	Area	Am't of purchase money reported to County Treasurers	Remarks.
	Brought forward	211,861.93	\$72,241 60	
173	Plumas	1,017.81	317 49	Reclamation complete.
71	Sacramento	6,500.00	9,871 38	Two dollars per acre expended.
73	Sacramento	174.64	118 65	Two dollars per acre expended.
74	Sacramento	525.00	519 83	Two dollars per acre expended.
76	Sacramento	1,967.39	1,319 91	Two dollars per acre expended.
89	Sacramento	1,123.00	1,870 05	Two dollars per acre expended.
117	Sacramento	3,608.56	2,259 89	Two dollars per acre expended.
129	Sacramento	670.00	702 38	Two dollars per acre expended.
3	Sacramento	17,369.00	15,755 00	Two dollars per acre expended.
148	Sacramento	8,233.00	5,273 97	Two dollars per acre expended.
175	Sacramento	1,934.56	2,768 76	Two dollars per acre expended.
205	Sacramento	7,483.16	not ascertain'd.	Two dollars per acre expended.
53	San Joaquin	8,738.38	2,534 85	Two dollars per acre expended.
57	San Joaquin	3,803.20	3,325 14	Two dollars per acre expended.
63	San Joaquin	1,920.00	2,071 76	Two dollars per acre expended.
130	San Joaquin	5,000.00	4,411 20	Two dollars per acre expended.
140	San Joaquin	193.50	191 05	Two dollars per acre expended.
157	San Joaquin	3,922.71	1,506 75	Two dollars per acre expended.
163	San Joaquin	1,628.51	1,206 42	Two dollars per acre expended.
58	San Joaquin	2,300.00	1,749 12	Two dollars per acre expended.
169	San Joaquin	756.49	580 42	Two dollars per acre expended.
61	San Joaquin	3,954.00	2,411 03	Two dollars per acre expended.
144	San Joaquin	4,683.50	3,293 36	Two dollars per acre expended.
110	San Joaquin	3,261.00	3,208 65	Two dollars per acre expended.
209	San Joaquin	902.23	not ascertain'd.	Two dollars per acre expended.
210	San Joaquin	1,008.57	222 07	Two dollars per acre expended.
189	San Joaquin	835.30	not ascertain'd.	Two dollars per acre expended.
17	San Joaquin	10,615.00	not ascertain'd.	Two dollars per acre expended.
72	San Joaquin	6,953.59	not ascertain'd.	Two dollars per acre expended.
105	Solano	12,056.86	7,155 24	Two dollars per acre expended.
126	Solano	994.96	246 47	Two dollars per acre expended.
137	Solano	3,528.25	1,270 02	Two dollars per acre expended.
145	Solano	991.02	1,098 74	Two dollars per acre expended.
10	Solano	1,138.00	1,123 95	Reclamation complete.
186	Solano and Napa	11,998.26	3,592 62	Two dollars per acre expended.
9	Solano	1,925.00	3,544 02	Two dollars per acre expended.
188	Solano	486.58	516 46	Two dollars per acre expended.
84	Solano	5,100.00	2,168 42	Two dollars per acre expended.
196	Solano	2,080.00	471 38	Two dollars per acre expended.
123	Solano	876.00	885 40	Two dollars per acre expended.
218	Solano	7,573.50	443 87	Two dollars per acre expended.
187	Solano	1,481.40	728 26	Two dollars per acre expended.
70	Sutter	13,000.00	4,831 28	Two dollars per acre expended.
5	Sutter	98,518.74	32,061 31	Two dollars per acre expended.
199	Tehama	1,400.00	376 20	Reclamation complete.
88	Tulare and Fresno	12,740.00	16,683 51	Reclamation complete.
135	Tulare and Fresno	1,194.37	1,222 34	Reclamation complete.
156	Tulare and Fresno	2,360.00	666 29	Reclamation complete.
81	Tulare	9,200.00	9,684 46	Reclamation complete.
154	Tulare	1,120.00	681 35	Reclamation complete.
153	Tulare	4,560.00	1,075 70	Reclamation complete.
152	Tulare	5,000.00	1,606 57	Reclamation complete.
155	Tulare	780.00	782 80	Reclamation complete.
158	Tulare	7,190.37	1,581 72	Reclamation complete.
170	Tulare	17,076.97	7,790 19	Reclamation complete.
180	Tulare	2,005.00	876 16	Reclamation complete.
181	Tulare	912.00	348 61	Reclamation complete.
182	Tulare	3,116.00	1,000 77	Reclamation complete.
179	Tulare	5,268.91	2,361 09	Reclamation complete.
216	Tulare	2,080.00	2,080 00	Reclamation complete.
	Totals	560,696.31	\$248,578 93	

Since August first, eighteen hundred and seventy-five, and up to December sixth, eighteen hundred and seventy-five, evidence has been received at this office from the various County Boards of Supervisors of the complete reclamation, or of the expenditure of two dollars per acre on works of reclamation, for the land embraced in the following described Swamp Land Districts, and the statement showing the names of the purchasers from the State, and the amount paid by each, has been forwarded to the County Treasurer of the proper county, in order to enable him to refund the said purchase money to said purchasers, or their legal representatives, as provided by law:

No. of District	COUNTY.	Area	Amount of purchase money reported to County Treasurer	Remarks.
202	Sonoma	\$1,536 95	\$782 97	Two dollars per acre expended.
246	Sonoma	2,727 00	1,143 38	Two dollars per acre expended.
204	Sonoma	9,815 00	2,647 42	Two dollars per acre expended.
247				
204				
247	Napa		3,574 82	
167	Tulare	450 00	95 75	Reclamation complete.
226	Tulare	2,720 00	523 53	Reclamation complete.
227	Tulare	1,120 00	232 68	Reclamation complete.
228	Tulare	120 00	24 93	Reclamation complete.
229	Tulare	80 00	16 62	Reclamation complete.
230	Tulare	120 00	24 93	Reclamation complete.
231	Tulare	80 00	16 62	Reclamation complete.
232	Tulare	120 00	24 93	Reclamation complete.
233	Tulare	40 00	8 31	Reclamation complete.
234	Tulare	160 00	33 24	Reclamation complete.
235	Tulare	120 00	24 93	Reclamation complete.
236	Tulare	160 00	33 24	Reclamation complete.
237	Tulare	80 00	16 62	Reclamation complete.
239	Tulare	120 00	24 93	Reclamation complete.
240	Tulare	1,160 00	240 99	Reclamation complete.
241	Tulare	560 00	108 04	Reclamation complete.
242	Tulare	920 00	191 16	Reclamation complete.
248	Tulare	3,384 00	1,824 79	Reclamation complete.
249	Tulare	1,380 00	1,219 80	Reclamation complete.
250	Tulare	1,430 00	1,327 21	Reclamation complete.
197	Tehama	1,120 00	1,316 12	Reclamation complete.
198	Tehama	1,720 00	383 30	Reclamation complete.
225	Sutter	7,320 96	4,805 81	Two dollars per acre expended.
136	Sacramento	439 36	529 30	Two dollars per acre expended.
185	Kern	21,432 64	5,137 85	Reclamation complete.
208	Kern	7,160 00	1,985 68	Reclamation complete.
192	Plumas	1,795 17	565 63	Reclamation complete.
238	Solano	19,544 14	4,856 05	Two dollars per acre expended.
	Totals	\$66,706 27	\$23,951 54	

During my term the following districts have been finally acted on in this office:

No. of District	COUNTY.	Area	Amount of purchase money reported to County Treasurer	Remarks.
222	Plumas	\$1,328 59	\$470 66	Reclamation complete.
259	Plumas	160 00	103 32	Reclamation complete.
255	Lassen	8,560 00	1,572 34	} Reclamation complete.
255	Plumas		1,416 12	
193	Plumas	1,840 19	863 89	Reclamation complete.
194	Plumas	639 09	193 68	Two dollars per acre expended.
270	Plumas	696 59	285 21	Reclamation complete.
211	Plumas	560 00	292 30	Reclamation complete.
268	Plumas	1,159 72	285 20	Reclamation complete.
278	Plumas	240 00	56 12	Reclamation complete.
280	Plumas	360 00	85 95	Reclamation complete.
281	Plumas	722 95	178 00	Reclamation complete.
292	Plumas	240 00	56 25	Reclamation complete.
184	Kern	31,384 30	7,608 16	Reclamation complete.
121	Kern	41,316 17	26,192 98	Two dollars per acre expended.
256	Solano	1,499 59	1,775 31	Two dollars per acre expended.
41	Solano	11,776 60	8,050 80	Reclamation complete.
294	Solano	7,578 42	2,434 09	(Two dollars per acre expended. Amended district area not before reported.
108	Colusa	160 00	40 54	(Two dollars per acre expended. Supplemental report from Supervisors.
275	Colusa	120 00	24 56	Reclamation complete.
243	Inyo	80 00	23 02	Reclamation complete.
244	Inyo	160 00	46 04	Reclamation complete.
245	Inyo	400 00	115 10	Reclamation complete.
260	Tulare	80 00	16 62	Reclamation complete.
261	Tulare	160 00	33 24	Reclamation complete.
262	Tulare	160 00	33 24	Reclamation complete.
263	Tulare	80 00	16 62	Reclamation complete.
264	Tulare	80 00	16 62	Reclamation complete.
265	Tulare	200 00	41 55	Reclamation complete.
209	San Joaquin	899 03	1,241 29	Two dollars per acre expended.
72	San Joaquin	6,953 81	3,618 03	Two dollars per acre expended.
223	San Joaquin	49,699 12	16,593 10	Two dollars per acre expended.
221	San Joaquin	11,074 34	5,957 24	Two dollars per acre expended.
282	San Joaquin	36,884 21	8,155 25	Two dollars per acre expended.
288	Lassen	160 00	38 20	Reclamation complete.
272	Lassen	1,228 00	1,824 45	Reclamation complete.
285	Lassen	800 00	201 60	Reclamation complete.
295	Lassen	1,224 00	446 64	Reclamation complete.
1	Lake	193 00	209 64	Reclamation complete.
	Totals	\$220,857 72	\$90,612 97	

RECEIPTS, EXPENDITURES, ETC.,

Of Surveyor-General's and State Land Offices, from January, 1858, to June 30th, 1877.

H. A. HIGLEY, SURVEYOR-GENERAL AND REGISTER.

January, 1858, to January, 1862.

Salary of Surveyor-General.....	\$8,050 08	
Salary of Draughtsman.....	9,660 00	
Pay of Porter.....	650 00	
Rent of offices.....	3,170 00	
Contingent expenses, including postage and expressage.....	2,092 12	
Copying maps.....	750 00	
Purchase of maps.....	1,248 00	
Purchase of instruments.....	225 00	
Total Surveyor-General's office.....		\$25,845 20
Salary of Register of Land Office.....	\$3,990 00	
Salary of Clerks in Land Office.....	12,918 00	
Contingent expenses of Land Office, including postage and expressage.....	2,196 53	
Total State Land Office.....		19,104 53

RECEIPTS.

Fees from Register of State Land Office..... \$1,548 92

J. F. HOUGHTON, SURVEYOR-GENERAL AND REGISTER.

January, 1862, to December, 1867.

Salary of Surveyor-General.....	\$11,794 77	
Salary of Clerks of Surveyor-General.....	10,620 00	
Pay of Porter of Surveyor-General.....	1,062 50	
Rent of offices.....	3,920 00	
Purchase of maps.....	934 25	
Copying maps.....	231 00	
Binding books, and contingent expenses.....	714 57	
Postage and expressage.....	677 63	
Total Surveyor-General's office.....		29,954 72
Salary of Register of State Land Office.....	\$11,771 18	
Salary of Clerks.....	24,410 00	
Pay of Porter.....	812 50	
Binding books, and contingent expenses.....	772 49	
Postage and expressage.....	739 10	
Extra clerk hire.....	1,000 00	
Total State Land Office.....		39,505 2

RECEIPTS.

Fees from Register of State Land Office..... \$10,503 31

J. W. BOST, SURVEYOR-GENERAL AND REGISTER.

December, 1867, to December, 1871.

Salary of Surveyor-General	\$8,011 08	
Salary of Clerks	13,530 00	
Pay of Porter	915 23	
Rent of offices	1,320 00	
Purchase of maps	677 75	
Copying maps	307 00	
Binding books, and contingent expenses	446 25	
Postage and expressage	729 30	
Traveling expenses of Surveyor-General Bost	392 00	
Traveling expenses of United States Surveyor-General Day	1,353 12	
Extra clerk hire	1,425 00	
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Total Surveyor-General's office		\$29,106 72
Salary of Register of Land Office	\$8,011 08	
Salaries of Clerks	13,380 00	
Salary of Draughtsman	1,380 00	
Pay of Porter	87 50	
Binding books, and contingent expenses	452 57	
Postage and expressage	670 65	
Extra clerk hire	825 00	
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Total State Land Office		24,806 80

RECEIPTS.

Fees from Register of State Land Office ----- \$9,168 90

ROBERT GARDNER, SURVEYOR-GENERAL AND REGISTER.

December, 1871, to December, 1875.

Salary of Surveyor-General	\$8,011 22	
Salary of Clerks	28,940 00	
Pay of Porter	1,202 27	
Purchase of maps	1,320 00	
Copying maps	185 00	
Binding books, and contingent expenses	353 00	
Postage and expressage	725 00	
Traveling expenses of Surveyor-General and United States Surveyor-General	1,071 00	
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Total Surveyor-General's office		41,807 39
Salary of Register of State Land Office	\$8,011 12	
Salary of Clerks	14,410 00	
Postage and expressage	1,137 09	
Binding books, and contingent expenses	200 00	
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Total State Land Office		23,758 21

RECEIPTS.

Fees from Surveyor-General and Register of
State Land Office ----- \$25,032 97

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WILLIAM MINIS, SURVEYOR-GENERAL AND REGISTER.

December, 1875, to June 30th, 1877.

Salary of Surveyor-General	\$3,133 36	
Salary of Clerks	12,220 00	
Pay of Porter	470 00	
Copying maps	96 00	
Postage and expressage	125 00	
Total Surveyor-General's office		16,044 36
Salary of Register of State Land Office	\$3,133 36	
Salary of Clerks	5,670 00	
Postage and expressage	275 00	
Total State Land Office		9,078 36

RECEIPTS—MINIS' TERM.

Fees from Surveyor-General	\$11,026 75
Fees from Surveyor-General for the month of June, paid in July	872 25
Fees from Register of State Land Office	3,684 25
Fees from Register of State Land Office for the month of June, paid in July	568 50
Total	\$16,151 75

RECAPITULATION.

	Surveyor-General.	Land Office.
H. A. Higley's term, expenses	\$25,845 20	\$19,104 53
J. F. Houghton's term, expenses	29,954 72	39,505 27
J. W. Bost's term, expenses	29,106 73	24,806 80
Robert Gardner's term, expenses	41,807 39	23,758 21
William Minis' term, from Dec. 1875, to June 30th, 1877, expenses	16,044 36	9,078 36
Total expenses	\$142,758 40	\$116,253 17
H. A. Higley's term, fees	\$1,548 92	
J. F. Houghton's term, fees	10,503 31	
J. W. Bost's term, fees	9,168 90	
Robert Gardner's term, fees	25,032 97	
William Minis' term, fees	16,151 75	
Total receipts	\$62,405 85	

MISCELLANEOUS ITEMS.

<i>Higley's Term.</i>		
Establishing eastern boundary line	\$1,000 00	
Compiling maps, etc., of swamp and overflowed land	1,000 00	
		\$2,000 00
<i>Houghton's Term.</i>		
*Establishing eastern boundary line	\$7,000 00	
Purchase of seal of office	30 00	
Survey of State Prison grounds	150 00	
Expenses of trip to Washington	2,000 00	
Purchase of safe (L. O.)	400 00	
Removing office	200 00	
Compiling information for Legislature, swamp and over- flowed lands	600 00	
		10,380 00

* Of this amount, eight hundred and eight dollars and forty-five cents was returned to the treasury.

Bost's Term.

Examination and survey of outlet of Sacramento River----	\$500 00	
Purchase of transit for Surveyor-General's office-----	2,000 00	
Survey and sale of tide lands-----	500 00	
		3,000 00.

Gardner's term.

Survey of boundary line between Siskiyou and Lassen Counties-----	\$2,500 00	
Survey and sale of tide lands-----	500 00	
		3,000 00
Services of Registers and Receivers-----		10,251 00
Listing lands, paid to E. O. F. Hastings-----		17,786 94
Total-----		\$46,417 94

RECEIPTS FROM COUNTY TREASURERS

From sales of school lands, and amount disbursed from School Land Fund for annulments of certificates and restitution.

RECEIPTS FROM COUNTY TREASURERS FROM SALES OF SCHOOL LANDS.

Five Hundred Thousand-Acre Grant.

	Principal.	Interest.
Amount received from October, 1858, to June 30th, 1877----	\$383,745 83	\$401,792 67

Sixteenth and Thirty-sixth Sections.

Amount received from July, 1861, to June 30th, 1877-----	1,119,370 66	687,047 23
Totals-----	\$1,503,116 49	\$1,088,839 90

Costs for Annulments.

Amount of costs for annulments of certificates from March, 1870, to June 30th, 1877-----	\$22,003 90
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Restitution of Money for Land sold not the Property of the State.

Amount refunded from January, 1871, to June 30th, 1877-----	\$54,605 36
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STATISTICAL TABLES—1875 AND 1876.

TABLE OF STATISTICS.

Industrial and other statistical information for the year eighteen hundred and seventy-five, as reported to the Surveyor-General by the several County Assessors, embracing the entire State.

COUNTIES.	Acres of Land Inclosed in 1875	Acres of Land Cultivated in 1875	WHEAT.		BARLEY.		OATS.	
			Acres	Bushels	Acres	Bushels	Acres	Bushels
Alameda	119,296	97,418	45,242	727,258	27,737	738,674	1,007	24,925
Alpine	300	300	20	400	100	3,000	10	175
Amador	62,413	16,972	690	17,016	9,844	54,330	50	1,800
Butte	321,700	147,525	131,085	2,315,505	15,200	297,400	120	2,120
Calaveras	52,315	16,051	344	4,822	2,433	45,692		
Colusa	228,920	252,000	210,000	3,150,000	25,000	320,000	100	1,500
Contra Costa	176,000	82,060	58,490	1,522,320	17,890	678,250	4,580	160,060
Del Norte	12,090	2,300	177	5,210	288	5,760	205	8,000
El Dorado	40,000	7,000	500	5,000	610	6,000	200	2,000
Fresno	50,871	20,668	11,881	55,255	10,594	13,250		
Humboldt	80,000	19,000	1,800	54,000	840	33,600	5,640	272,000
Inyo	7,247	5,148	1,275	226,333	675	16,890	486	15,812
Kern			3,000	75,000	15,000	450,000	100	2,500
Lake	52,048	10,568	4,919	99,748	2,618	66,860	166	3,435
Lassen ^a								
Los Angeles	47,500	64,500	1,000	20,000	14,000	415,950	470	3,000
Marin	399,536	13,568	2,122	40,318	1,463	46,816	4,526	131,254
Mariposa	4,540	2,727	26	475	38	1,305		
Mendocino	193,890	44,885	11,840	255,310	7,120	156,718	8,100	249,900
Merced	140,000	154,529	125,672	1,200,000	19,000	350,000	50	1,500
Modoc	40,000	16,000	6,200	173,600	9,185	275,550	400	14,500

Mono	43,688	1,300	200	4,000	150	2,500	300	7,500
Monterey	298,780	130,475	99,650	2,650,000	48,750	900,500	1,700	16,600
Napa	111,400	48,855	35,400	708,865	4,550	91,040	850	25,000
Nevada	75,000	16,000						
Placer*								
Plumas	50,000	5,730	1,350	17,902	445	12,913	2,837	55,864
Sacramento	304,000	76,420	20,344	325,504	42,013	913,460	1,410	28,240
San Bernardino	23,000	14,000	5,000	50,000	5,000	107,000	110	1,640
San Benito	184,600	41,300	30,250	276,300	9,450	86,890	200	6,000
San Diego	8,087	17,117	10,034	109,533	3,606	53,923	18	400
San Francisco	5,749	3,826	35		265	1,500	18	
San Joaquin	310,000	274,200	210,000	2,100,000	38,500	575,000	200	4,200
San Luis Obispo	200,000	55,000	6,000	120,000	30,000	1,500,000		
San Mateo	100,250	60,000	6,850	120,440	4,400	110,000	5,500	137,500
Santa Barbara	46,320	40,265	4,000		15,808			
Santa Clara	518,850	216,234	170,818	1,537,632	12,181	194,896	135	12,631
Santa Cruz	70,556	20,185	7,100	182,000	4,200	157,400	738	
Shasta	60,350	31,075	7,600	91,200	8,525	145,875	2,560	82,920
Sierra	22,697	2,277	323	5,778	721	28,996	1,019	28,112
Siskiyou	150,000	28,395	12,000	180,000	2,450	49,000	4,720	118,000
Solano	378,213	312,394	180,256	4,066,255	61,736	1,975,552	8,025	248,775
Sonoma	310,520	194,575	45,000	800,000	21,213	424,260	19,597	587,410
Stanislaus	45,825	431,470	420,000	3,240,000	50,000	5,000,000		
Sutter	280,325	312,150	135,020	1,785,030	30,076	601,120	150	4,000
Tehama	209,430	146,800	85,500	1,282,500	9,950	199,000	2,200	66,000
Trinity	12,355	7,980	840	12,310	20		30	500
Tulare	85,370	56,704	22,340	267,420	31,786	476,230	420	12,750
Tuolumne	164,600	8,142	2,000	30,980	1,200	19,084	20	400
Ventura	5,000	50,000	6,000	120,000	27,000	500,000		
Yolo	160,171	196,847	162,842	2,270,780	31,371	627,420		
Yuba	137,400	45,000	17,717	250,580	9,411	153,610	279	6,190
Totals	6,552,476	3,838,575	2,321,852	32,341,609	684,212	25,883,314	79,246	2,345,113

* Not reported.

TABLE OF STATISTICS—Continued.

COUNTIES.	RYE.		CORN.		BUCKWHEAT.		PEAS.	
	Acres	Bushels	Acres	Bushels	Acres	Bushels	Acres	Bushels
Alameda			830	23,670			100	2,000
Alpine			1,600	28,970				
Amador			406	14,180				
Butte	40		292	5,860				
Calaveras			150	3,000				
Colusa			260	9,620				
Contra Costa	70	1,680	10	250				
Del Norte					12	470	6	140
El Dorado							10	250
Fresno			54	1,090				
Humboldt			300	1,200	12	160	2,560	78,800
Inyo			2,316	437,666				
Kern			400	10,000				
Lake	4	50	279	10,865				
Lassen								
Los Angeles			14,200	639,000	60	1,350	110	2,750
Marin	490	11,760						
Mariposa				580				
Mendocino	100	2,700	380	7,710				
Mered	50	1,250	375	15,000	50	1,000	330	2,000
Modoc			10	200				
Mono								
Monterey			875	24,300	50	200	86	1,850
Napa	5	80	1,840	64,400			5	100
Nevada								
Placer								
Plumas	6	66						

	1,620	61,000	15	465	16	500
Sacramento	800	35,000				
San Bernardino	350	7,500			6	300
San Diego	593	13,495			5	
San Francisco					5	200
San Joaquin	280	8,400	30	600	20	500
San Luis Obispo	500	20,000			125	3,000
San Mateo	100	2,000				
Santa Barbara	8,078					
Santa Clara	123	5,730			10	194
Santa Cruz	1,290	23,290	22	360		
Shasta	80	1,700				
Sierra						
Siskiyou	250	2,500	45	675	40	600
Solano	2,203	90,323				
Sonoma	37,000	740,000				
Stanislaus	225	8,000				
Sutter	1,500	27,485	525	9,275		
Tehama	1,000	27,000				
Trinity	30	560				
Tulare	650	16,250				
Tuolumne						
Ventura	10,000	200,000				
Yolo	560	11,200			78	7,582
Yuba	658	25,500				
Totals	92,467	2,624,494	821	14,575	3,512	100,766

Sacramento	30	20,000	925	30,000	1,100	5,700
San Bernardino	40	---	40	825	120	500
San Benito	15	---	15	300	300	750
San Diego	15	---	15	307	84	414
San Francisco	3	---	3	---	326	215
San Joaquin	90	---	90	3,500	200	620
San Luis Obispo	200	---	200	6,000	800	2,400
San Mateo	400	---	400	8,000	5,000	15,000
Santa Barbara	2,068	---	2,068	---	2,465	---
Santa Clara	6	---	6	70	293	6,530
Santa Cruz	300	---	300	3,750	580	2,340
Shasta	80	---	80	1,600	175	300
Sierra	---	---	---	---	70	283
Siskiyou	70	---	70	1,100	350	210
Solano	---	---	---	---	31	62
Sonoma	125	---	125	2,500	2,500	6,000
Stanislaus	---	---	---	---	---	---
Sutter	180	---	180	4,187	425	1,275
Tehama	15	120,000	15	600	60	200
Trinity	12	---	12	412	125	400
Tulare	150	---	150	4,050	700	467
Tuolumne	5	---	5	150	60	220
Ventura	1,000	---	1,000	10,000	200	800
Yolo	320	51,281	320	14,000	310	1,000
Yuba	10	---	10	500	260	1,560
Totals	202	289,981	9,140	150,494	33,490	117,924

TABLE OF STATISTICS—Continued.

COUNTIES.	SWEET POTATOES.		ONIONS.		HAY.		FLAX.	
	Acres	Tons	Acres	Bushels	Acres	Tons	Acres	Pounds
Alameda			201	26,100	16,716	21,363		
Alpine					237	274		
Anaador	4	50			6,854	5,800		
Butte			2	200	16,325	14,750		
Calaveras			65	2,275	7,181	7,320		
Colusa					16,700	19,800		
Contra Costa			12	2,100	20,400	32,120		
Del Norte					1,000	3,000		
El Dorado					5,000	5,000		
Fresno								
Humboldt			4	306	3,572	9,000		
Inyo			4	405	3,416	5,004		
Kern	40	100	15		1,500	7,000		
Lake					5,536	6,435		
Lassen								
Los Angeles	186	1,070	107	28,350	4,100	10,250	10	For seed.
Marin					4,214	7,374		
Mariposa					2,633	1,950		
Mendocino					14,760	19,220		
Merced	400	2,800	50	1,000	7,000	8,000		
Modoc					20,000	30,000		
Mono					6,000	6,000		
Monterey					12,740	25,480		
Napa			5	320	8,300	8,500		
Nevada					3,600	5,200		
Placer								
Plumas					14,303	16,251		

Sacramento	410	2,015	50	1,125	28,000	27,385		
San Bernardino	30	100	6	1,200	1,000	2,400		
San Benito					4,600	4,000		
San Diego	7	18			2,657	3,237		
San Francisco			2	52	2,105	1,650		
San Joaquin	15	28	100	40,000	21,200	14,000		
San Luis Obispo			20	1,200	70,000	105,000		
San Mateo			60	7,500	8,000	7,500		
San Mateo	160		35		1,370		25	
Santa Barbara			53	5,962	27,686	43,789	1,277	57,000
Santa Clara	10	64			2,730	3,350	315	402,105
Santa Cruz					16,385	8,000		
Shasta					9,045	11,392		
Sierra					8,350	12,525		
Siskiyou			20	1,200	39,756	49,700		
Solano					43,745	50,000		
Sonoma	120	300			2,000	15,000		
Stanislaus					31,751	23,008		
Sutter	375	1,255	27	2,000	40,000	55,000		
Tehama	25	70	10	350	4,157	4,700		
Trinity			6	420	750	875		
Tulare	24	120			2,100	3,074		
Tuolumne			5	500	6,000	8,000	500	200,000
Ventura	25	50			12,900	18,250		
Yolo	100	250	55	3,053	11,117	9,662		
Yuba	40	250						
Totals	1,971	8,540	914	125,618	598,751	754,628	2,127	719,105

TABLE OF STATISTICS—Continued.

COUNTIES.	HOPS.		TOBACCO.		COTTON.		SUGAR BEETS.	
	Acres	Pounds	Acres	Pounds	Acres	Pounds	Acres	Tons
Alameda	117	38,250					2	20
Alpine								
Anador	38	15,200						
Butte								
Calaveras								
Colusa								
Contra Costa								
Del Norte								
El Dorado								
Fresno								
Humboldt								
Inyo								
Kern								
Lake	72	35,600						
Lassen								
Los Angeles	17	27,200	145	17,400			50	500
Marin								
Mariposa								
Mendocino	420	630,000						
Merced	25	1,500	45	2,100	200	8,000	8	20
Modoc								
Mono								
Monterey	50			23,627				
Napa	81	99,000					3	70
Nevada								
Placer								
Plumas								
Sacramento	306	400,000						

TABLE OF STATISTICS—Continued.

COUNTIES.	Pounds of Butter-----	Pounds of Cheese-----	Pounds of Wool-----	Pounds of Honey-----	Value of Fruit Crop----	Number of Bearing Lemon Trees-----	Number of Bearing Orange Trees-----	Number of Bearing Olive Trees-----
Alameda-----	142,260	10,000	282,800	1,950	\$350,000	138	241	942
Alpine-----	4,000							
Amador-----	3,500	1,307	82,450	1,400		213	300	28
Butte-----	12,230	1,005	386,520			277	450	37
Calaveras-----	32,800	480		1,550		7	18	7
Colusa-----	5,000		1,200,000					
Contra Costa-----	83,240	10,280	53,310	1,890		1		
Del Norte-----	134,000		640	125	500			
El Dorado-----	28,200	8,000	40,000					
Fresno-----			1,344,625	4,000	20,000			
Humboldt-----	40,000	200	319,000	2,150	1,930			
Inyo-----	19,492	1,100	4,000					
Kern-----			1,978,969		5,000			
Lake-----	22,795	14,200	183,810	1,720	5,040			
Lassen-----								
Los Angeles-----	38,100	8,350	2,034,828	571,230	525,000	6,900	36,700	2,170
Marin-----	3,540,000	540,000						
Mariposa-----	3,250	250		150		6	19	3
Mendocino-----	18,900		980,000					
Merced-----	55,000	37,000	450,000	5,000	50,000	20	15	
Modoc-----	50,000	5,000	105,000		625			
Mono-----	880							
Monterey-----	30,000	11,000	875,000		7,000			
Napa-----	135,900	13,400	115,385	4,000	128,465	5	11	1
Nevada-----								
Placer-----								
Plumas-----	231,800	8,000	600	5,000	3,000			

Sacramento	377,000	60,000	405,000	2,000	110	175	50
San Bernardino	5,000	2,000	150,000	109,900	1,300	1,700	275
San Benito	30,000	296,000	325,000	1,200			
San Diego	19,755	900	450,200	418,380	150	160	400
San Francisco	930						
San Joaquin	195,000	21,000	466,100	3,500			
San Luis Obispo	500,000	600,000	1,500,000	2,000	100	150	3,000
San Mateo	925,000	1,200,000			175	50	150
Santa Barbara	13,890	4,000	500,000	3,000	3,200	1,800	2,200
Santa Clara	92,291	523,879	96,000	1,492	1,142	3,293	2,012
Santa Cruz	115,298	28,240					5
Shasta	9,000		165,882	1,200			
Sierra	75,750						
Siskiyou	800,000	2,500		3,800			
Solano	221,900		904,100		372	1,994	227
Sonoma	2,125,000	250,000	875,000			50	
Stanislaus	8,000		374,000	13,240			
Sutter	92,135		140,316	2,000		10	6
Tehama	24,000		150,270	3,500			
Trinity	16,300	900		675			
Tulare	130,040		2,040,290	24,270	6	10	
Tuolumne	29,736		46,650	8,000	10	25	
Ventura		1,000	750,000	10,000	200	200	
Yolo	186,920	8,762	411,946	6,000	45	273	48
Yuba	18,000		87,000		10	75	
Totals	10,652,382	3,666,753	20,274,691	1,212,322	14,387	47,919	11,561
			\$2,559,666				

Plumas	---	---	---	---	2	4,800	1,295	112	8,298
Sacramento	3,400	65,000	4,149	8	563,692	9,837	334	13,454	
San Bernardino	1,700	75,000	4,400	1	15,000	2,997	275	11,703	
San Benito	140	20,000	1,500	2	24,000	2,972	180	12,418	
San Diego	200	2,875	3,095	2	50,000	4,815	459	22,134	
San Francisco	---	---	---	55	7,875,000	7,962	61	4,830	
San Joaquin	175	65,000	3,500	3	78,000	12,852	1,020	23,027	
San Luis Obispo	80	200	---	2	75,000	5,100	300	41,022	
San Mateo	100	40,000	---	4	110,000	3,602	17	8,256	
Santa Barbara	---	5,000	3,200	3	---	4,700	250	45,000	
Santa Clara	2,084	182,932	45,500	7	3,500,000	10,850	964	34,013	
Santa Cruz	140	80,000	15,000	4	101,708	3,295	139	7,042	
Shasta	400	2,000	200	2	13,000	27,087	239	9,957	
Sierra	---	---	---	8	---	900	84	5,800	
Siskiyou	50	500	800	3	1,000	4,708	534	45,967	
Solano	20,393	925,000	1,060	3	---	6,217	728	16,180	
Sonoma	6,300	3,397,612	33,000	3	---	9,246	717	28,154	
Stanislaus	---	11,327	2,703	2	17,000	5,200	1,369	6,902	
Sutter	575	400,000	---	1	3,500	5,759	577	5,469	
Tahama	550	15,000	5,000	1	15,750	4,371	356	12,286	
Trinity	2	400	---	2	15,000	1,002	263	5,244	
Tulare	380	4,500	400	3	17,420	7,195	535	17,428	
Tuolumne	500	90,540	1,540	3	150,000	3,285	187	8,650	
Ventura	200	6,000	1,000	1	6,000	3,000	200	6,200	
Yolo	927	215,786	3,351	3	11,870	6,636	805	8,421	
Yuba	700	4,000	1,700	1	14,400	4,159	384	8,026	
Totals	53,894	8,200,919	225,310	182	13,234,955	270,514	22,775	942,944	

TABLE OF STATISTICS—Continued.

COUNTIES.	Number of Sheep	Number of Cashmere and Angora Goats	Number of Hogs	Grist Mills.		Barrels of Flour Made	Bushels of Corn Ground
				Steam Power	Water Power		
Alameda	56,695	1,830	2,523	3	2	24,250	2,600
Alpine	717	633					
Amador	24,118		4,303	1	1	5,000	11,850
Butte	86,700		9,440	3	3	135,000	9,500
Calaveras	39,705	8,392	2,806				
Colusa	206,993	1,114	17,000	3		17,000	
Contra Costa	26,280	420	9,322	3			
Del Norte	1,109		709		1	1,000	75
El Dorado	14,845		2,782		1		
Fresno	506,270	2,854	8,535		1		
Humboldt	114,483	369	9,245	3	2	6,500	1,000
Inyo	5,487	495	1,511		2	4,500	16,891
Kern	580,538		5,979	1	2		
Lake	24,130	3	5,533	2	1	9,000	400
Lassen							
Los Angeles	508,707	100	9,790		5	2,750	58,100
Marin	1,504		16,180				
Mariposa	101,993	45	6,625		1		
Mendocino	234,440	467	16,668	3	2		7,500
Merced	233,000	150	4,759		3	11,225	
Modoc	38,270		2,141	1	2	2,220	100
Mono	19,689		246		1	1,000	500
Monterey	186,840	1,200	4,573	3		19,000	
Napa	28,940	374	5,630	3	3	12,920	9,500
Nevada	4,424	1,138	2,204				
Placer							
Plumas	5,957		736		2	1,400	

Sacramento	201,354	300	9,001	3	---	---	240,000	140,000
San Bernardino	61,278	1,040	1,025	---	4	---	10,000	10,000
San Benito	76,668	130	2,754	1	1	---	60,000	800
San Diego	258,720	50	1,393	1	---	---	5,134	1,647
San Francisco	---	---	3,551	6	---	---	500,000	11,800
San Joaquin	138,176	---	11,250	5	---	---	94,600	15,500
San Luis Obispo	200,000	1,200	8,000	1	3	---	14,000	2,500
San Mateo	317	---	2,444	1	---	---	2,000	---
Santa Barbara	239,800	5	5,100	1	---	---	2,500	2,000
Santa Clara	34,981	303	8,647	4	1	---	73,654	3,831
Santa Cruz	702	132	2,035	4	1	---	23,160	36,110
Shasta	48,176	---	8,830	---	3	---	7,425	975
Sierra	4,415	405	226	---	1	---	100	---
Siskiyou	34,008	---	2,200	2	5	---	2,000	1,250
Solano	103,254	116	8,860	2	---	---	---	---
Sonoma	120,331	1,020	13,701	3	7	---	50,000	10,000
Stanislaus	187,482	193	6,586	1	1	---	18,120	5,000
Sutter	30,087	---	9,943	---	---	---	---	---
Tehama	300,050	1,000	7,240	1	1	---	48,000	3,500
Trinity	28,105	---	443	---	1	---	800	100
Tulare	408,058	---	13,103	2	2	---	18,500	1,940
Tuolumne	20,000	---	4,919	---	3	---	---	---
Ventura	180,000	---	12,000	---	1	---	---	---
Yolo	75,809	---	17,015	3	---	---	52,867	1,025
Yuba	34,626	---	3,370	2	1	---	152,000	10,000
Totals	5,838,391	25,478	314,856	72	71	---	1,627,625	381,994

TABLE OF STATISTICS—Continued.

COUNTIES.	SAW MILLS.		Feet of Lumber Sawed.	Number of Shingles Made.	QUARTZ MILLS.		MINING DITCHES.	
	Steam Power.	Water Power.			Number.	Tons Crushed.	Number.	Miles in Length.
Alameda								
Alpine	1		200,000	10,000	3			
Amador	4		5,000,000	1,400,000	23	260,000	9	149
Butte	14	4	45,000,000	1,500,000	10	3,600		
Calaveras	3	2	2,000,158	4,003,680	38	24,999	19	498
Colusa	2		300,000	100,000				
Contra Costa								
Del Norte	3	4	7,000,000	10,000			8	29
El Dorado	11	3	6,000,000		18		13	640
Fresno	1	2						
Humboldt	15	1	75,000,000	15,000,000				
Inyo	4	4	8,628,500	1,000,000	3	8,400		
Kern	2	1	4,000,000		3	50,000	1	2
Lake	6	1	3,450,000	300,000				
Lassen								
Los Angeles	3		30,000		1	5,000	4	21
Marin	1							
Mariposa	2	2			22		23	69
Mendocino	17	3	50,000,000	12,000,000				
Merced								
Modoc	2	7	2,400,000	150,000				
Mono	2	2	1,000,000	100,000	3	4,000	2	7
Monterey								
Napa	1		500,000		1			
Nevada	20	11	6,000,000	2,000,000	48	146,000	76	630
Placer								
Plumas	5	8			10	80,000	320	600

Sacramento	5		3,500,000	300,000	4	120,000	5	77
San Bernardino							3	12
San Benito								
San Diego	6	1	1,975,000	75,000	6	5,000		
San Francisco								
San Joaquin								
San Luis Obispo	1	1	200,000					
San Mateo	14		6,500,000	41,000,000				
Santa Barbara	2							
Santa Clara								
Santa Cruz	15	1	13,197,230	1,237,000				
Shasta	2	5	20,000,000	1,500,000				
Sierra	11	10	10,450,000	675,000	1		80	365
Siskiyou	3	8	3,500,000	200,000	23		53	220
Solano		13	4,000,000	150,000	6	4,050	18	407
Sonoma	8		40,000,000	10,000,000	4			
Stanislaus							1	10
Sutter								
Tehama	7	3	26,914,500	200,000			231	405
Trinity	2	8	1,800,000					
Tulare	3	2	7,400,000	420,000	2	1,200		
Tuolumne	3	2	6,100,000	200,000	34		6	150
Ventura								
Yolo								
Yuba	3	2	2,000,000				23	65
Totals	202	111	364,045,388	93,530,680	263	692,249	895	4,356

TABLE OF STATISTICS—Continued.

COUNTIES.	IRRIGATING DITCHES.		WOOLEN MILLS.		COTTON MILLS.		COAL.	RAILROADS.	
	Number	Acres Irrigated	Number	Pounds of Wool Used	Number	Pounds of Cotton Used		Number	Miles in Length
Alameda	1	750						6	37
Alpine	15	700							
Amador									
Butte								1	57
Calaveras								1	66-100
Colusa									
Contra Costa							165,295	1	11 50-100
Del Norte	4	700						2	3
El Dorado	20							1	18
Fresno	3							1	61
Humboldt								4	15
Inyo									
Kern	27	20,000						1	70
Lake									
Lassen									
Los Angeles	55	26,900	1	51,000				5	118 80-100
Marin								2	55
Mariposa	12								
Mendocino								4	10
Merced	21	5,110						1	37
Modoc	147	10,000							
Mono									
Monterey								3	69
Napa								1	41
Nevada									
Placer		475						2	49

Plumas	20	2,000					74 75-100
Sacramento			1	225,000		4	48
San Bernardino	12	8,000	1	5,000		1	16
San Benito						1	40
San Diego							13
San Francisco	2	6,000	2	2,500,000		2	92
San Joaquin	3	1,000	1	200,000		4	10
San Luis Obispo						1	25
San Mateo							
Santa Barbara							
Santa Clara			1	101,716		5	74
Santa Cruz	2	350				3	30
Shasta	70	2,000				1	18
Sierra	3					1	2
Siskiyou	98	8,000					
Solano						2	44
Sonoma			1			1	66
Stanislaus	1	300				1	30
Sutter	1	320				2	34
Tehama						1	40
Trinity							
Tulare	33	14,500				2	59 60-100
Tuolumne							
Ventura	3						
Yolo	3	18,726				2	58
Yuba			1	300,000		2	28
Totals	556	125,831	9	3,382,716		74	1,457 31-100

TABLE OF STATISTICS—Continued.

COUNTIES.	ASSESSED VALUE OF PROPERTY FOR 1875.				Estimated Total Population	Registered Voters
	Real Estate	Improvements	Personal Property	Total Valuation.		
Alameda	\$11,711,465 00	\$2,327,095 00	\$1,594,978 00	\$15,633,538 00	14,550	2,560
Alpine	148,000 00	100,935 00	204,176 00	453,111 00	914	314
Anador	1,063,265 00	821,370 00	301,980 00	2,186,615 00	13,500	3,446
Butte	6,736,058 00	1,320,525 00	1,788,556 00	9,845,139 00	20,000	4,782
Calaveras	738,237 00	424,609 00	723,956 00	1,886,802 00	8,500	2,904
Colusa	7,233,277 00	881,351 00	1,895,415 00	10,010,043 00	10,000	3,500
Contra Costa	5,256,594 00	805,660 00	1,162,891 00	7,225,145 00	10,300	
Del Norte	203,945 00	186,205 00	246,694 00	636,844 00	3,000	489
El Dorado	675,657 00	855,072 00	806,594 00	2,337,323 00	10,000	3,000
Fresno	5,296,199 00	569,765 00	2,418,172 00	8,284,136 00	8,000	1,600
Humboldt	2,261,319 00	1,021,821 00	1,610,366 00	4,893,506 00	15,000	3,000
Inyo	1,114,049 00	384,131 00	665,389 00	2,163,569 00	3,000	1,193
Kern	3,689,151 00	486,375 00	2,546,900 00	6,722,426 00	6,500	1,887
Lake	1,115,468 00	539,496 00	496,848 00	2,151,812 00	6,000	1,285
Lassen						
Los Angeles	8,956,700 00	2,977,741 00	2,909,874 00	14,844,315 00	29,500	8,059
Marin	5,413,466 00	1,106,698 00	1,345,324 00	7,865,488 00	10,000	1,209
Mariposa	605,855 00	327,440 00	564,733 00	1,498,028 00	5,000	1,443
Mendocino	2,658,869 00	1,425,210 00	2,120,987 00	5,785,066 00	11,000	3,100
Merced					6,444	1,561
Modoc	245,207 00	195,850 00	603,668 00	1,044,725 00	2,800	955
Mono	143,857 00	159,185 00	280,377 00	563,419 00	700	304
Monterey	6,468,905 00	974,163 00	1,749,481 00	9,192,549 00	14,700	4,000
Napa	4,760,565 00	1,771,530 00	1,322,300 00	7,854,395 00	14,000	3,324
Nevada	3,702,825 00	1,715,385 00	1,613,166 00	7,031,376 00	23,000	6,875
Placer						

Phumas	1,030,251 00	396,514 00	578,242 00	2,005,007 00	6,000	1,450
Sacramento	5,253,555 00	8,122,180 00	4,660,665 00	18,038,400 00	38,000	9,300
San Bernardino	1,712,928 00	397,386 00	591,423 00	2,701,737 00	12,000	2,523
San Benito	3,986,877 00	495,265 00	787,214 00	4,369,356 00	7,000	1,400
San Diego	1,392,097 00	348,294 00	1,045,057 00	3,385,448 00	13,177	2,530
San Francisco	140,408,382 00	48,383,590 00	71,757,030 00	260,349,002 00	272,000	36,000
San Joaquin	11,820,786 00	2,805,574 00	3,244,139 00	17,870,529 00	26,000	6,361
San Luis Obispo	3,560,816 00	600,000 00	1,276,439 00	5,437,255 00	9,500	2,200
San Mateo	4,648,990 00	799,616 00	829,585 00	6,278,191 00	12,000	3,000
Santa Barbara	4,380,825 00	1,000,355 00	1,580,500 00	6,961,680 00	9,000	2,640
Santa Clara	19,316,528 00	4,875,269 00	5,710,839 00	29,902,636 00	33,000	8,957
Santa Cruz	4,261,269 00	1,261,733 00	1,064,926 00	6,587,928 00	14,250	2,525
Shasta	688,588 00	380,215 00	795,189 00	1,863,992 00	6,625	1,872
Sierra	376,826 00	152,435 00	405,104 00	934,365 00	4,500	2,100
Siskiyou	735,155 00	463,560 00	1,215,272 00	2,413,987 00	8,300	2,300
Solano	6,075,178 00	2,109,824 00	1,225,996 00	9,410,998 00	20,930	4,180
Sonoma	8,811,839 00	3,261,263 00	3,261,991 00	13,335,633 00	40,000	5,666
Stanislaus	3,946,600 00	362,066 00	1,250,961 00	5,559,627 00	8,000	2,000
Sutter	2,785,005 00	603,380 00	653,626 00	4,042,011 00	7,500	1,500
Tehama	2,443,150 00	304,250 00	966,859 00	3,714,259 00	5,700	1,925
Trinity	322,133 00	177,077 00	331,321 00	830,733 00	3,400	890
Tulare	2,465,524 00	894,990 00	1,403,086 00	4,763,600 00	13,500	3,532
Tuolumne	561,260 00	560,675 00	610,080 00	1,732,015 00	8,000	2,355
Ventura	2,098,888 00	418,358 00	737,891 00	3,255,137 00	7,000	1,778
Yolo	7,276,204 00	1,230,298 00	1,736,573 00	10,243,075 00	13,000	4,000
Yuba	1,817,765 00	1,417,965 00	1,205,615 00	4,441,345 00	10,000	3,000
Totals	\$322,058,354 00	\$102,779,684 00	\$137,898,678 00	\$562,736,716 00	\$86,790	176,754

TABLE OF STATISTICS.

Industrial and other statistical information for the year eighteen hundred and seventy-six, as reported to the Surveyor-General by the several County Assessors, embracing the entire State.

COUNTIES.	Acres of Land Inclosed.	Acres of Land Cultivated	WHEAT.		BARLEY.		OATS.	
			Acres	Bushels	Acres	Bushels	Acres	Bushels
Alameda*	67,148	18,820	750	18,980	2,550	55,304	60	2,100
Alpine*	350,000	210,000	155,000	2,400,000	23,000	500,000	400	9,000
Butte	51,033	16,400	384	4,011	2,996	31,444		
Calaveras	233,110	236,585	242,609	4,500,990	34,802	806,495	44	1,408
Colusa	211,228	102,531	78,378	1,354,961	20,700	697,640	2,690	86,118
Contra Costa	11,058	1,933	412	4,241	273	6,065	315	10,905
Del Norte	100,000	20,000	2,000	20,000	1,000	10,000	500	5,000
El Dorado	58,855	63,869	32,944	296,860	24,652	327,960		
Fresno	85,460	21,016	2,000	40,000	1,000	35,000	5,000	256,800
Humboldt	8,111	4,400	1,020	19,750	620	13,773	641	9,719
Inyo	27,800	18,000	2,000	40,000	6,000	180,000		
Kern	50,135	15,854	4,316	93,291	2,874	75,019	292	11,385
Lake	49,800	13,594	1,752	16,784	1,687	23,837	435	10,130
Los Angeles	52,754	81,450	7,000	140,000	15,250	467,500	475	3,000
Marin	310,660	14,500	22,000	41,250	1,500	47,000	46,200	132,250
Mariposa	22,070	3,805	57	910	363	7,350		
Mendocino	208,984	49,821	12,350	252,700	7,926	194,240	9,080	186,300
Merced	160,000	360,733	300,000	4,500,000	40,000	600,000		

Modoc	47,680	18,245	8,010	168,764	9,683	251,725	300	8,000
Mono	25,000	25,000	25	500	200	4,000	25	500
Monterey	442,050	170,300	90,000	1,333,333	40,000	833,333	5,000	218,750
Napa	145,680	54,175	30,565	520,310	4,555	108,475	955	22,585
Nevada	81,000	12,000						
Placer	155,951	89,420	43,125	594,447	20,040	292,850	9,875	
Plumas	53,000	5,750	1,200	12,890	300	9,213	2,600	55,280
Sacramento	328,000	84,370	15,174	224,877	44,086	793,548	2,115	41,146
San Bernardino	56,000	20,000	4,000	60,000	8,000	240,000	120	4,000
San Benito	190,000	47,700	33,000	360,000	10,000	140,000	150	3,000
San Diego	2,537	14,039	6,225	104,209	2,690	62,748		
San Francisco	6,200	3,800	200		180	350	25	
San Joaquin	320,000	238,600	180,150	1,800,000	36,180	625,600	410	8,200
San Luis Obispo	201,000	60,000	6,000	150,000	30,000	900,000	100	
San Mateo	105,000	60,000	6,500	130,000	7,000	210,000	10,000	300,000
Santa Barbara	48,140	40,000			500	2,000		
Santa Clara	463,331	275,420	155,343	2,875,120	25,310	430,250	3,560	103,110
Santa Cruz	70,950	20,380	7,200	179,000	4,250	158,200	2,580	83,100
Shasta	60,350	31,275	8,000	88,000	7,000	102,000	150	3,000
Sierra	21,000	1,755	165	2,255	686	11,234	763	13,267
Siskiyou	134,000	29,455	13,200	198,000	2,300	46,000	4,600	115,000
Solano	9,652	109,394	93,575	1,965,175	15,819	553,665	145	4,700
Sonoma	375,541	153,611	33,000	600,000	14,726	26,000	13,660	200,000
Stanislaus	70,000	60,000	416,666	5,000,000	54,444	800,000		
Sutter	281,815	202,215	91,266	1,368,975	25,000	450,000	200	4,600
Tehama	122,430	136,956	72,114	792,512	15,554	234,906	1,250	28,750
Trinity	22,223	7,436	860	11,430	15	300	10	270
Tulare	94,280	74,806	26,460	423,360	35,780	644,040	315	8,190
Tuolumne	70,930	10,984	2,060	30,900	935	18,534	35	300
Ventura	10,000	75,000	5,000	100,000	50,000	1,000,000		
Yolo	135,340	138,995	122,695	2,322,269	18,559	40,062		
Yuba	142,000	52,000	15,463	224,525	7,976	156,400	367	8,874
Totals	6,319,864	3,576,366	2,352,213	35,385,579	678,957	13,224,060	125,442	1,958,737

*Not reported.

TABLE OF STATISTICS—Continued.

COUNTIES.	RYE.		CORN.		BUCKWHEAT.		PEAS.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Alameda								
Alpine								
Amador			1,075	36,250				
Butte	80	1,500	600	23,000				
Calaveras			300	7,893				
Colusa	5	50	112	1,680				
Contra Costa	30	592	324	12,236			7	165
Del Norte			44	1,360	1	12	15	400
El Dorado	500	5,000						
Fresno			576	12,560				
Humboldt			369	53,392	20	300	4,060	243,600
Inyo			2,511	18,000				
Kern			600	12,665				
Lake			404	2,400				
Lassen	3	35	40	698,625	10	200	10	100
Los Angeles	500	12,500	15,425		65	1,462	115	2,875
Marin								
Mariposa	35	353	47	1,110				
Mendocino	200	4,200	480	10,150				
Merced	6,000	90,000	500	25,000			300	2,000
Modoc			10	200				
Mono								
Monterey			1,000	25,000				
Napa	20	175	1,940	47,670			8	150
Nevada								
Placer	110		10					

Plumas	10	130	2,153	70,440	226	4,826	20	600
Sacramento	116	2,047	1,000	40,000	10	200	10	300
San Bernardino								
San Benito	100	1,600	400	8,270				
San Diego	72	1,205	294	6,485				
San Francisco							7	22
San Joaquin	2,870	57,400	290	10,900	20	400	20	600
San Luis Obispo	25		300	100,000	2	100	20	400
San Mateo			30	600				
Santa Barbara								
Santa Clara			1,000	20,000				
Santa Cruz			1,300	23,310	15	310		
Shasta			75	1,500				
Sierra								
Siskiyou	75	3,750	250	3,000	60	900	75	1,125
Solano			237	5,980				
Sonoma	423	8,756	28,000	5,000				
Stanislaus	600	6,000	2,000	8,000				
Sutter			1,871	45,425	1,200	36,300		
Tehama	600	7,200	650	19,500				
Trinity			33	670				
Tulare	140	2,100	1,500	29,900				
Tuolumne	3	45						
Ventura			10,000	200,000				
Yolo			536	12,872				
Yuba			425	20,200				
Totals	12,517	204,638	78,511	1,620,743	1,629	45,010	4,667	252,337

Sacramento	310	85,800	204	4,040	1,341	13,651
San Bernardino	20	15,000	100	4,500	200	1,500
San Benito					350	700
San Diego			15	151	40	58
San Francisco			5	25	482	536
San Joaquin			85	2,500	250	750
San Luis Obispo			200	4,000	1,000	4,000
San Mateo			400	6,000	5,000	56,000
Santa Barbara			1,000		2,000	
Santa Clara					3,000	9,000
Santa Cruz			300	3,750	602	2,520
Shasta			50	1,333	180	400
Sierra					30	74
Siskiyou			70	1,400	400	600
Solano			25	400		
Sonoma	5		210	3,500	20	60
Stanislaus					3,730	8,000
Sutter			175	5,250	625	1,875
Tehama	100	190,000	18	666	80	240
Trinity			13	180	180	540
Tulare			340	5,780	1,100	3,300
Tuolumne					100	220
Ventura	5	50	500	8,000	500	5,000
Yolo	39	45,975	433	43,463	305	1,555
Yuba			30	2,000	475	1,200
Totals	616	468,025	6,708	142,333	36,489	160,024

TABLE OF STATISTICS—Continued.

COUNTIES.	SWEET POTATOES.		ONIONS.		HAY.		FLAX.	
	Acres	Tons	Acres	Bushels	Acres	Tons	Acres	Pounds
Alameda								
Alpine	6	80	3	250	7,400	7,350		
Amador	12	19			51,000	54,000		
Butte			32	1,014	7,755	6,033		
Calaveras					17,414	28,325		
Colusa			25	4,562	34,906	49,015		
Contra Costa					748	1,637		
Del Norte					10,000	10,000		
El Dorado					5,816	6,328		
Fresno			3	276	2,476	7,328		
Humboldt			3	335	2,695	3,760		
Inyo	60	150			4,500	27,000		
Kern					7,819	10,197		
Lake					14,204	23,238		
Lassen			10	260	5,124	12,810	10	
Los Angeles	210	1,206	132	34,320				
Marin					4,800	7,475		
Mariposa			1	100	3,075	2,245		
Mendocino					15,120	20,148		
Merced	400	2,800	50	1,000	12,000	15,000		
Modoc					42,000	525,000		
Mono			5	2,500	15,000	15,000		
Monterey					5,000	10,500		
Napa			10	640	14,970	20,305		
Nevada					2,500	2,000		
Placer	40	75	3	125	7,400	9,400		
Plumas					15,680	19,800		

Sacramento	422	2,527	37	9,300	32,965	33,203
San Bernardino	50	400	10	2,000	5,000	15,000
San Benito					3,500	4,500
San Diego					4,597	5,613
San Francisco	7	7	2	32	1,760	1,234
San Joaquin			2	31	20,000	20,000
San Luis Obispo	20	40	90	3,600	18,200	80,000
San Mateo			20	1,200	80,000	160,000
Santa Barbara			50	2,000	10,000	9,000
Santa Clara					1,000	1,000
Santa Cruz			500	5,000	31,900	33,500
Shasta					2,755	3,450
Sierra					15,600	7,800
Siskiyou			25	1,500	10,500	8,900
Solano	11	23			12,525	12,525
Sonoma	100	500			13,502	19,515
Stanislaus					60,000	70,000
Sutter	325	1,308	12	600	14,000	6,300
Tehama	23	49	12	600	14,925	11,715
Trinity			5	400	43,510	48,950
Tulare	19	66			3,560	6,300
Tuolumne					1,700	2,550
Ventura	20	600			1,700	2,550
Yolo	125	1,247	5	100	3,074	3,074
Yuba	10	32			8,000	10,000
					16,122	27,206
					14,640	15,764
Totals	1,859	11,129	1,047	71,745	726,088	1,432,593
						270
						308,070

TABLE OF STATISTICS—Continued.

COUNTIES.	HOPS.		TOBACCO.		COTTON.		SUGAR BEETS.	
	Acres	Pounds	Acres	Pounds	Acres	Pounds	Acres	Tons
Alameda								
Alpine								
Amador	58	52,200						
Butte								
Calaveras								
Colusa								
Contra Costa								
Del Norte								
El Dorado								
Fresno							68	1,923
Humboldt							6	39
Inyo								
Kern								
Lake	62	46,000						
Lassen	1	100						
Los Angeles	40	64,000	155	186,000			20	200
Marin							56	560
Mariposa								
Mendocino	484	723,900						
Merced	30	20,000	45	3,000	50	12,800	8	20
Modoc								
Mono								
Monterey	20	4,000						
Napa	73	74,000						
Nevada							5	120
Placer								
Plumas								

Sacramento	399	638,446				127	1,430
San Bernardino						10	90
San Benito			100	12,000			
San Diego			1	300			
San Francisco						4	10
San Joaquin	60	60,000					
San Mateo	2	2,000				200	1,200
Santa Barbara							
Santa Clara	70	75,000					
Santa Cruz	18	16,000				1,150	8,280
Shasta							
Sierra							
Siskiyou							
Solano						17	180
Sonoma	65	6,500					
Stanislaus						10	100
Sutter	13	10,175					
Tehama							
Trinity							
Tulare							
Tuolumne							
Ventura							
Yolo	178	874,327					
Yuba							
Totals	1,573	2,666,648	301	201,300	50	1,681	14,152

TABLE OF STATISTICS—Continued.

COUNTIES.	Pounds of Butter-----	Pounds of Cheese-----	Pounds of Wool-----	Pounds of Honey-----	Value of Fruit Crop-----	Number of Bearing Lem- on Trees-----	Number of Bearing Orange Trees-----	Number of Bearing Olive Trees-----
Alameda-----								
Alpine-----								
Amador-----	11,000		98,225	600	\$24,000 00	265	550	46
Butte-----	16,600	222	680,000	1,119		11	102	16
Calaveras-----								
Colusa-----	850		584,580					
Contra Costa-----	218,545	18,850	91,542	2,350	32,807 00	15	45	10
Del Norte-----	127,600	3,000	775		1,925 00			
El Dorado-----	100,000	20,000	40,000		50,000 00			
Fresno-----			1,958,956					
Humboldt-----	70,950	300	457,932					
Inyo-----	18,550	1,200	4,200	2,030	1,000 00			
Kern-----		6,000	1,523,860		8,000 00			
Lake-----	19,150	8,629	227,752	1,664	8,685 00			
Lassen-----	7,700	8,000	50,000	2,000	9,500 00			
Los Angeles-----	39,650	8,500	1,996,280	739,550	673,000 00	8,350	48,850	2,275
Marin-----	3,553,350	250,000						
Mariposa-----	4,183		178,250			3	50	1
Mendocino-----	15,750		1,200,500					
Merced-----	60,000	41,000	1,668,480	7,400	60,000 00	20	15	
Modoc-----	40,050	1,250	132,000	520	750 00			
Mono-----	50,000							
Monterey-----	360,000	120,000	1,500,000	7,500				
Napa-----	140,000	48,000	105,570	5,000	127,460 00	5	34	10
Nevada-----	5,400							
Placer-----	14,300		158,840	700	15,000 00	41	79	4

Pinna	229,400	7,000	5,000	2,500	4,000 00	117	238	52
Sacramento	275,785	50,000	372,635	1,940	175,135 00	2,300	1,900	300
San Bernardino	10,000	400	181,500	140,000	4,000 00	5	12	15
San Benito	23,000	300,000	280,000	1,200	4,000 00	417	371	432
San Diego	14,130	2,900	495,420		4,035 00			
San Francisco	862							
San Joaquin	240,000	2,500	460,000	2,000	9,000 00		20	2,000
San Luis Obispo	500,000	600,000	2,000,000	5,000	10,000 00	50		
San Mateo	7,000	1,000,000						
Santa Barbara	3,000		400,000					
Santa Clara	260,000	250,000	30,000	5,500	2,500,000 00	100	100	50
Santa Cruz	112,135	27,900			10,000 00			5
Shasta	7,500		165,815	1,000	25,000 00			
Sierra	100,000		4,000					
Siskiyou	8,000	2,200	90,500	2,500			251	
Solano	118,800		427,240		112,000 00	380	2,000	250
Sonoma	2,756,000	386,000	900,000	485			30	
Stanislaus			562,446	13,104	9,800 00			
Sutter	75,182	20,387	160,185	3,875	270,000 00	6	15	7
Tehama	23,400		1,708,398	4,000	23,000 00		72	
Trinity	14,000	800		500	6,000 00			
Tulare	416,000	2,500	2,210,000	27,280	47,000 00	15	24	
Tuolumne	29,240		35,000	8,000	133,817 00	10	60	
Ventura				20,000		300	400	100
Yolo	89,756	11,792	739,976	6,573		25	207	30
Yuba	20,000		125,000		100,000 00	25	168	
Totals	10,188,818	3,199,420	24,031,047	1,036,490	\$4,454,914 00	12,460	55,606	5,603

TABLE OF STATISTICS—Continued.

COUNTIES.	Number of Acres of Grape Vines-----	Wine, Number of Gal- lons-----	Brandy, Number of Gallons-----	Number of Breweries--	Number of Gallons----	Number of Horses-----	Number of Mules-----	Total Number of Horned Cattle-----
Alameda								4,500
Alpine	950	20,250	1,000	5	58,650	3,270	240	
Amador	890	14,550	960	4		5,350	725	
Butte	521	56,000	1,585	6	24,049	3,695	171	7,799
Calaveras	47			1	20,700	8,243	2,958	5,732
Colusa	440	36,760		1		7,715	391	12,603
Contra Costa				1	4,000	505	112	3,180
Del Norte				3		2,302	84	6,906
El Dorado	2,000	200,000	3,000			5,368	460	28,476
Fresno	209					5,802	1,158	27,819
Humboldt				4	30,000	3,796	820	13,075
Inyo	21			5	13,580	3,533	790	42,131
Kern	60			4		2,033	166	4,757
Lake	20			3	2,007	5,510	175	32,005
Lassen	5					10,061	823	14,365
Los Angeles	5,180	1,525,000	60,000	7	110,000	2,575	100	27,521
Marin	22	3,500		1		1,962	283	6,419
Mariposa	77	13,190	250	2	5,500	5,824	557	14,940
Mendocino	100			4	24,000	4,173	855	14,480
Merced	600	20,000	5,000			4,129	270	21,580
Modoc	10			1	2,500	2,500	100	11,000
Mono				1	5,000	6,557	421	29,219
Monterey	5			2	40,000	3,680	507	8,088
Napa	3,220	664,000	20,750	16	500,000	2,138	72	5,155
Nevada	30,000	9,320		2		2,977	181	4,586
Placer	880	66,684	4,700	4	75,000	1,913	130	8,479
Plumas				3	4,000			

Sacramento	3,440	44,990	15,605	8	587,520	9,837	334	13,454
San Bernardino	20,000	210,000	400	1	20,000	3,011	268	6,798
San Benito	120	20,000	2,000	2	25,000	2,480	153	11,095
San Diego	206	4,240	3,840	2	45,000	5,202	555	18,362
San Francisco				35	10,800,000	8,601	225	4,508
San Joaquin	225	90,000	4,500	3	53,550	12,087	1,032	17,751
San Luis Obispo	30	500		1	30,000	5,143	167	30,000
San Mateo	80	50,000		3	130,000	3,602	317	9,337
Santa Barbara				3	7,500	3,626	289	14,795
Santa Clara	950	50,500	48,600	6	600,000	11,485	419	26,137
Santa Cruz	140	80,000	15,000	4	727,350	3,035	150	6,655
Shasta	400	7,415	1,969	2	14,000	2,783	184	10,864
Sierra				6		791	83	3,063
Siskiyou	50	500	000	3	55,000	4,600	540	46,915
Solano	1,387	149,710	2,200	3	180,000	5,476	622	12,790
Sonoma	6,500	2,500,000	30,000	3		9,813	546	22,967
Stanislaus	147	50,500	2,360	2	16,000	1,030	1,867	7,964
Sutter	863	6,873		1	23,175	4,923	575	4,465
Tehama	485	6,000	4,400	1	18,200	4,594	501	12,286
Trinity	2	300		2	15,000	1,048	283	
Tulare	400	15,000		3	18,400	6,749	627	14,573
Tuolumne	500	90,540	1,500	3	50,000	3,305	180	8,136
Ventura	400	6,500	2,726	1	5,000	2,637	184	6,239
Yolo	519	138,150	3,250	3	70,590	6,730	876	7,714
Yuba	560	31,320	1,000	1	18,000	4,340	338	7,575
Totals	82,661	6,194,292	237,495	182	14,442,191	232,539	23,864	679,268

TABLE OF STATISTICS—Continued.

COUNTIES.	Number of Sheep-----	Number of Cashmere and Angora Goats-----	Number of Hogs-----	GRIST MILLS.		Barrels of Flour Made--	Bushels of Corn Ground--
				Steam Power-----	Water Power-----		
Alameda-----	42,450		4,250	1	1	4,250	16,350
Alpine-----	136,125	1,080	10,500	4	3	190,000	22,000
Amador-----	6,839	8,100	4,049				
Butte-----	256,057	1,243	24,310	3		18,725	280
Calaveras-----	38,271	358	8,598	3			
Colusa-----	1,286	100	747		1	500	70
Contra Costa-----	18,059		2,055		1		
Del Norte-----	686,652		18,532		1		
El Dorado-----	137,839	429	8,883	3	2	5,469	1,045
Fresno-----	7,865	300	925		2	5,600	15,681
Humboldt-----	337,241		8,235	2	1	5,200	374
Inyo-----	33,303	9	6,528	2	2	11,400	2,150
Kern-----	54,175	104	1,175		2	2,000	1,870
Lake-----	499,070	100	11,120	3	4	3,525	77,300
Lassen-----	2,000		17,250		1		
Los Angeles-----	97,619	51	6,782				
Marin-----	308,334	331	19,254	3	2		
Mariposa-----	278,080	384	5,679		3	15,000	3,000
Mendocino-----	44,445		2,432	1	2	2,150	120
Merced-----	10,000	1,200	750		1	100	
Modoc-----	263,120	6,772	10,187	3		17,560	840
Mono-----	60,466		5,517	3	2	21,000	8,500
Monterey-----	4,775	2,088	2,570				
Napa-----	60,806	33,966	3,470	1			
Nevada-----							
Placer-----							

Phumas	4,044	874	888	3	2	1,500	130,000
Sacramento	201,354	330	9,101		4	195,000	18,000
San Bernardino	68,700					18,000	1,000
San Benito	86,000	17	3,975	1	1	65,000	36,548
San Diego	191,174		2,076	1		6,735	330,000
San Francisco	7,500		2,034	8		2,760	17,800
San Joaquin	132,054		11,260	6		132,000	10,000
San Luis Obispo	200,000	882	8,650	2	2	7,000	
San Mateo			2,444	3		4,000	
Santa Barbara	193,991	2	4,651	1		4,500	2,500
Santa Clara	39,811	25	6,637	5	1	276,000	1,000
Santa Cruz	550	100	2,620	4	1	23,340	35,600
Shasta	66,388		10,402		3	8,500	1,200
Sierra	3,109		279		1		
Siskiyou	33,500		1,900	2	5	21,000	2,800
Solano	71,146	35	8,392			312,000	1,000
Sonoma	97,480	1,235	19,011	3	7	30,000	10,000
Stanislaus	187,482	800	6,085	1	1	4,600	3,000
Sutter	30,087		9,943	1			2,075
Tehama	363,461	600	8,313	1	1	38,000	6,000
Trinity	26,330		431		1		
Tulare	434,975	2,581	14,481	3	2	42,336	7,474
Tuolumne	19,635		4,156		3		
Ventura	135,029	544	15,773		2	4,000	1,175
Yolo	92,497		19,675	4		61,256	12,000
Yuba	40,720		6,298	2	1	74,634	
Totals	6,171,644	64,720	363,842	86	69	1,961,880	437,512

TABLE OF STATISTICS—Continued.

COUNTIES.	SAW MILLS.		Feet of Lumber Sawed	Number of Shingles Made	QUARTZ MILLS.		MINING DITCHES.	
	Steam Power	Water Power			Number	Tons Crushed	Number	Miles in Length
Alameda								
Alpine	4		3,950,000	450,000	18	88,840	11	360
Anador	15	4	47,000,000	1,200,000	6	1,000		290
Butte	1	2	1,000,000	3,000,000	33	35,000	26	515
Calaveras								
Colusa	2							
Contra Costa								
Del Norte	2	5	10,000,000	10,000			19	65
El Dorado	11	3	4,000,000		18		13	640
Fresno	2		1,500,000		1			
Humboldt	18	2	64,000,000	15,000,000				
Inyo	4	4	3,828,000	800,000	4	96,000	1	7
Kern	3	1			9	54,000	1	4
Lake	6		3,750,000	200,000				
Lassen	1	4	2,000,000	100,000			1	5
Los Angeles	4		60,000		1		4	21
Marin	4			250,000				
Mariposa	3	1	1,550,000					
Mendocino	18	3	53,000,000	15,000,000	24	20,625	20	651
Merced								
Modoc	1	8	3,500,000	120,000				
Mono	1	3	250,000		5	3,000	3	15
Monterey								
Napa	1		700,000		1			
Nevada	18	10	30,000,000	18,000,000	48	130,000	76	630
Placer	17	1	25,550,000	2,500,000	9	12,000	49	387
Plumas	4	5	3,000,000		8	75,000	325	613

Sacramento	6	3,000,000	200,000	5	110,000	5	77
San Bernardino	6					3	12
San Benito							
San Diego	6	1,875,130	70,000	6			
San Francisco							
San Joaquin							
San Luis Obispo	1	100,000					
San Mateo	12	5,000,000	37,000,000				
Santa Barbara							
Santa Clara	1	500,000					
Santa Cruz	15	15,000,000	10,000,000				
Shasta	4	8,100,000	800,000	1		80	365
Sierra	10		500,000	22		54	223
Siskiyou	3	4,000,000	200,000	6	4,100	98	600
Solano							
Sonoma	15	60,000,000	10,000,000				
Stanislaus						2	16
Sutter							
Tehama	8	34,450,000				1	5
Trinity	2	2,000,000				233	409
Tulare	5	93,000,000	22,700	2	1,500		
Tuolumne	3	5,100,000	300,000	34		8	150
Ventura							
Yolo							
Yuba	2	1,500,000	500,000			20	75
Totals	229	492,263,130	116,222,700	261	631,065	1,033	5,549½

TABLE OF STATISTICS—Continued.

COUNTIES.	IRRIGATING DITCHES.		WOOLEN MILLS.		COTTON MILLS.		COAL.	RAILROADS.	
	Number	Acres Irrigated	Number	Pounds of Wool Used	Number	Pounds of Cotton Used	Tons Mined	Number	Miles in Length
Alameda									
Alpine									8 12-100
Amador	4	750					29,200	1	58
Butte									
Calaveras									66-100
Colusa									18 15-100
Contra Costa							108,078	1	11 50-100
Del Norte	5	700						2	4
El Dorado	20							1	18 75-100
Fresno	3							1	61
Humboldt								4	12
Inyo									
Kern	165	8,000						1	117
Lake									
Lassen	50	8,000							
Los Angeles	56	35,000	1					5	176 80-100
Marin								2	61 50-100
Mariposa	5								
Mendocino								5	21
Merced	6	35,000	1						36 75-100
Modoc	180	28,500							
Mono	100	15,000							
Monterey									
Napa								3	69
Nevada		500						1	41
Placer	4	7,400						2	49 03-100
Plumas	28	2,800						2	115 25-100

Sacramento	12	10,000	1	310,000	5	90
San Bernardino			1	8,000	1	48 50-100
San Benito					1	15 75-100
San Diego					1	165
San Francisco			2	2,200,000	2	15
San Joaquin	2	2,000	1	190,000	3	92 25-100
San Luis Obispo		4,000			1	10 75-100
San Mateo					1	25
Santa Barbara						
Santa Clara			1	75,000	3	82
Santa Cruz	2	550			3	30 25-100
Shasta	100	2,200			1	18 80-100
Sierra						2 15-100
Siskiyou	20	10,000			1	
Solano						56
Sonoma			2		3	90
Stanislaus	1				3	33 79-100
Sutter	1	480			2	22
Tehama	7	400			1	40 54-100
Trinity						
Tulare	35	15,000			2	59 60-100
Tuolumne						
Ventura	23					
Yolo	3	12,000			3	51 77-100
Yuba		1,000	1	250,000	2	28 37-100
Totals	772	199,080	11	3,003,000	74	1,837 63-100

TABLE OF STATISTICS—Continued.

COUNTIES.	ASSESSED VALUE OF PROPERTY FOR 1876.				Estimated Total Population-----	Registered Voters-----
	Real Estate-----	Improvements---	Personal Property.	Total Valuation--		
Alameda-----	\$1,208,810 00	\$773,415 00	\$527,775 00	\$2,510,000 00	10,350	3,440
Alpine-----	6,719,248 00	1,320,925 00	1,873,884 00	9,914,057 00	21,000	4,472
Amador-----	944,062 00	430,770 00	766,525 00	2,141,357 00	7,400	2,564
Calaveras-----	8,421,064 00	931,395 00	1,478,084 00	11,350,543 00	15,000	3,800
Colusa-----	5,224,248 00	813,889 00	1,065,099 00	7,103,236 00	10,300	3,195
Contra Costa-----	203,945 00	186,205 00	246,544 00	636,694 00	3,000	492
Del Norte-----	750,247 00	813,014 00	766,939 00	2,330,200 00	10,600	3,000
El Dorado-----	5,206,199 00	569,765 00	2,922,687 00	7,888,651 00	9,000	1,671
Fresno-----	2,381,256 00	1,149,705 00	1,584,655 00	5,115,616 00	18,000	3,200
Humboldt-----	249,599 00	128,946 00	660,589 00	1,039,134 00	3,800	960
Inyo-----	3,063,451 00	486,379 00	2,546,899 00	6,098,729 00	8,000	1,600
Kern-----	1,068,753 00	584,590 00	503,018 00	2,156,361 00	6,500	1,425
Lake-----	337,282 00	205,400 00	659,219 00	1,221,901 00	2,500	800
Lassen-----	9,415,016 00	3,611,795 00	2,711,941 00	15,738,752 00	31,600	8,570
Los Angeles-----	5,496,993 00	1,143,326 00	1,267,197 00	7,907,516 00	10,500	1,671
Marin-----	666,797 00	328,274 00	421,385 00	1,416,456 00	5,000	1,071
Mariposa-----	2,842,994 00	974,880 00	2,027,464 00	5,845,338 00	11,500	3,156
Mendocino-----	3,898,934 00	338,695 00	1,353,682 00	5,591,311 00	7,000	1,722
Merced-----	274,716 00	160,330 00	603,561 00	1,038,607 00	2,870	963
Modoc-----	160,235 00	145,745 00	311,350 00	617,330 00	1,000	300
Mono-----	5,137,425 00	791,950 00	1,252,732 00	7,182,107 00	15,400	2,900
Monterey-----	4,873,215 00	1,772,570 00	1,306,050 00	7,951,835 00	14,500	3,629
Napa-----	3,648,077 00	1,735,690 00	1,514,276 00	6,898,043 00	22,000	6,997
Nevada-----	2,953,524 00	871,750 00	1,624,146 00	5,451,420 00	8,600	2,906
Placer-----						

Plumas	861,693 00	476,995 00	723,477 00	2,062,165 00	6,000	1,350
Sacramento	7,607,820 00	5,963,385 00	4,430,960 00	18,002,165 00	38,000	10,050
San Bernardino	1,583,282 00	424,838 00	402,119 00	2,410,239 00	12,500	2,500
San Benito	2,767,217 00	477,500 00	503,246 00	3,747,963 00	7,500	1,550
San Diego	2,754,877 00	363,075 00	943,787 00	4,061,739 00	13,278	2,480
San Francisco	141,728,930 00	50,116,630 00	62,894,640 00	254,740,200 00	300,000	50,000
San Joaquin	9,496,920 00	4,737,125 00	3,047,545 00	17,281,590 00	27,000	5,400
San Luis Obispo	3,529,823 00	595,074 00	1,283,591 00	5,408,488 00	10,000	2,735
San Mateo	4,709,865 00	891,755 00	839,355 00	6,440,975 00	12,000	2,650
Santa Barbara	2,572,142 00	693,347 00	716,912 00	3,976,601 00	12,000	2,800
Santa Clara	19,161,689 00	4,490,530 00	4,123,050 00	27,775,269 00	45,000	9,225
Santa Cruz	4,080,009 00	1,285,935 00	960,498 00	6,326,442 00	16,100	2,725
Shasta	689,928 00	353,070 00	926,523 00	1,969,521 00	6,800	1,787
Sierra	339,626 00	152,435 00	397,374 00	909,435 00	5,000	1,800
Siskiyou	972,522 00	462,145 00	1,133,625 00	2,568,290 00	8,000	2,000
Solano	6,350,519 00	1,560,895 00	1,327,248 00	9,238,662 00	20,750	4,150
Sonoma	8,880,889 00	3,514,034 00	2,847,305 00	15,242,248 00	40,000	8,313
Stanislaus	4,066,319 00	612,526 00	1,230,961 00	5,929,806 00	10,500	2,699
Sutter	2,926,501 00	461,880 00	653,626 00	4,042,007 00	6,235	1,427
Tehama	1,684,922 00	853,990 00	1,299,857 00	3,838,699 00	7,000	2,314
Trinity	312,367 00	186,241 00	311,739 00	810,367 00	2,000	890
Tulare	2,915,524 00	892,990 00	4,403,086 00	5,211,600 00	13,000	3,620
Tuolumne	540,170 00	524,565 00	561,905 00	1,626,640 00	7,500	1,850
Ventura	2,500,000 00	194,555 00	700,000 00	3,394,555 00	11,500	3,687
Yolo	7,276,204 00	1,230,298 00	1,736,573 00	10,243,073 00	10,000	3,000
Yuba	1,740,215 00	1,318,995 00	1,231,560 00	4,290,770 00	10,000	3,000
Totals	\$317,330,063 00	\$103,124,361 00	\$126,240,281 00	\$546,694,705 00	905,583	195,300

REPORTS OF COUNTY ASSESSORS.

AMADOR COUNTY—J. J. JONES, ASSESSOR.

JACKSON, June 28th, 1877.

HON. WM. MINIS, Surveyor-General.

SIR: In conformity to the law, I herewith submit my annual and statistical reports, for the year eighteen hundred and seventy-six:

The assessed value of property for last year is about the same as the preceding one. The agricultural portion of the county is increasing in value slowly, crops yielding well every year. The quartz mining interest is in a prosperous condition, several mines paying dividends, and a large number are being actively prospected. Considerable interest is still manifested on the part of our citizens in the matter of preemption; the land in this county is being steadily taken up, and will all be under cultivation in a few years. Owing to the great demand and the value of wool, a number of stock-raisers (cattle) are selling out their cattle and horses and investing the proceeds in sheep, thousands of which are now driven into the foothills of the Sierras for summer pasturage.

Our wine interest is at a standstill, owing to the high tariff on liquors.

The production of corn is steadily on the increase. Lands which before the flood of eighteen hundred and sixty-two and eighteen hundred and sixty-three would raise no corn, now yield a high average to the acre.

Our canals are being used now (the largest ones) to run our quartz mills, and float down lumber from the forests of the Sierras, which is a great help to our quartz interests.

I think we have cause to rejoice at the prosperous condition of our county.

Very respectfully, your obedient servant,

J. J. JONES,
Assessor, Amador County.

TEHAMA COUNTY—J. EBY, ASSESSOR.

RED BLUFF, July 23d, 1877.

HON. WM. MINIS, Surveyor-General, State of California.

DEAR SIR: Herewith I hand you statistical report for eighteen hundred and seventy-six and eighteen hundred and seventy-seven, as required by law.

The same has been carefully compiled, and the exhibit shows a healthy growth of all the industries of Tehama County.

Said industries from which revenue is derived are agriculture, stock-raising (notably sheep), and the manufacture of lumber, which last interest, under the management of able capitalists, is assuming important proportions.

No other manufactories of note as yet exist, the very many natural advantages with which the county is favored never having been utilized.

With a soil not particularly noted for fertility, climatic influences are such that a failure of crops has never been known, and the recent unfortunate combination of circumstances in the southern portion of the State has materially added to our population and to the cultivated agricultural area of our county.

Said agricultural interest has also received a stimulus in the passage of the No-fence Law, applicable only to the northern portion of the county, while the stock interest has not been materially lessened thereby.

Though partly within the supposed mineral belt, no mines of any value have ever been developed in Tehama County.

Very respectfully,

J. EBY, Assessor.

SUMMARY OF STATISTICS.

ASSESSOR'S OFFICE, SAN FRANCISCO, 1877.

HON. WM. MINIS, Surveyor-General of the State of California.

DEAR SIR: I beg herewith to submit my annual report to your office, in accordance with the law, of the agricultural products of this county, together with a report of the mechanical and manufacturing industries during the year eighteen hundred and seventy-six and seven.

As will be seen, this is a flattering exhibit of the mechanical industries of this county, notwithstanding the business depression of the past year.

The agricultural productions of this county are necessarily small.

Very respectfully, yours, etc.,

ALEXANDER BADLAM.

City and County Assessor.

Amalgamating pan manufactory	1
Men employed	13
Pans made	45
Horse-power of steam engine	6
Value of manufactures	\$20,000 00
Artificial Stone manufactories	3
Men employed	25
Value of manufactures	\$100,000 00
Axle-grease manufactory	1
Men employed	7
Resin consumed yearly, barrels	1,280
Butter consumed yearly, pounds	24,500
Chemicals consumed yearly, pounds	20,000
Value of manufactures	\$35,000 00
Bag manufactories	5
Men employed	200
Aggregate value	\$1,900,000 00
Barrel manufactory	1
Men employed	100
Barrels, half barrels and kegs, made annually	260,000
Horse-power of steam engine	60
Barrels made by sugar refineries	58,000
Syrup kegs made by tub and pail factories	10,000
Aggregate value	\$150,000 00
Bed spring manufactories	4
Men employed	30
Copper wire used, tons	500
Aggregate value of manufactures	\$150,000 00
Bedstead manufactories	5
Men employed	225
Lumber consumed annually, feet	300,000
Value of manufactures	\$100,000 00
Bellows manufactories	2
Men employed	10
Bellows manufactured	1,500
Value	\$25,000 00
Bedding manufactories	7
Persons employed	300
Value of manufactures	\$750,000 00
Billiard table manufactories	5
Men employed	30
Billiard tables made	240
Value	\$60,000 00

SUMMARY OF STATISTICS—Continued.

Boot and shoe manufactories	
Men employed }	
Women employed }	5,000
Value of manufactures	\$3,000,000 00
Broom handle manufactories	3
Men employed	6
Handles made annually	700,000
Value	\$15,000 00
Box manufactories, wooden	12
Men employed	400
Horse-power of steam	400
Value of manufactures	\$1,200,000 00
Brass foundries	9
Men employed	300
Value of manufactures including copper used (500 tons)	\$800,000 00
Breweries	35
Men employed	500
Beer made annually, barrels	300,000
Hops consumed annually, pounds	500,000
Barley consumed annually, tons	18,000
Aggregate value	\$2,000,000 00
Broom manufactories	6
Men employed	100
Brooms made annually, dozens	75,000
Value	\$150,000 00
Brush manufactories	4
Men employed	20
Value of manufactures	\$50,000 00
Candle manufactories	6
Men employed	75
Candles manufactured, boxes	200,000
Value	\$600,000 00
Clothing manufactories	10
Men and women employed	3,500
Value, including overalls, suits, and underwear	\$2,000,000 00
Cigar manufactories	200
Men employed	4,000
Cigars made annually	107,000,000
Cigarettes made annually	7,000,000
Average value of cigars per thousand	\$35 00
Average value of cigarettes	\$4 00
Cement pipe manufactories	2
Men employed	115
Aggregate value	\$300,000 00
Chemical works	2
Men employed	72
Nitrate of soda used, tons	1,800
Sulphur used, tons	2,300
Flour of sulphur refined	400
Sulphuric acid and nitric acid, tons	4,500
Sulphate of copper made, tons	200
Aggregate value of products	\$600,000 00
Cracker manufactories	6
Men employed	280
Horse-power of engine	108
Aggregate value	\$1,800,000 00

SUMMARY OF STATISTICS—Continued.

Carriage and wagon manufactories	36
Men employed	700
Carriages, wagons, etc., made annually	3,000
Railroad cars	200
Horse-power of engines	200
Aggregate value (in all their branches)	\$2,000,000 00
Coffee and spice mills	15
Men employed	150
Coffee ground and roasted annually, pounds	4,000,000
Chocolate made annually, pounds	317,000
Spices ground annually, pounds	500,000
Horse-power of engines	90
Aggregate value	\$1,500,000 00
Cordage and rope manufactory	1
Men employed	75
Hemp rope manufactured, tons	2,500
Horse-power of steam engines	150
Aggregate value	\$500,000 00
Carriage spring manufactory	1
Men employed	15
Carriage springs made, tons	100
Value	\$50,000 00
Distilleries	3
Men employed	60
Proof-gallons spirits produced	1,000,000
Bushels of grain used	255,000
Value of spirits produced	\$1,350,000 00
Dry docks (floating)	2
Men employed	15
Capacity of docks—(1 of 1,800 tons, 1 of 800 tons)	2,600
Dry dock (stone)	1
Length of excavation in solid rock, feet	450
Width at top, feet	120
Depth, feet	30
Width at entrance, feet	90
Capacity of length, feet	425
Capacity of drawing, feet	22
Capacity of pumps for clearing, per hour, cubic feet	325,368
Tubular boilers of 4-inch tubes	4
Dimensions of each boiler, diameter, inches	25
Dimensions of each boiler, length, feet	16
Fire surface of boilers, square feet	3,800
Men employed	6
Total cost of work	\$675,000 00
Elevator manufactories	2
Men employed	25
Aggregate value	\$70,000 00
Electrical machinery works	2
Men employed	16
Capital employed	\$69,000 00
Flouring mills	8
Men employed	136
Flour made annually, barrels	330,000
Hominy made annually, tons	200
Buckwheat and rye flour, tons	300
Oat meal and groats, tons	2,500
Corn meal and farina, tons	2,700
Feed barley, tons	7,400
Cracked wheat, tons	650

SUMMARY OF STATISTICS—Continued.

Split peas, tons	480
Graham flour, barrels	2,500
Cracked corn, tons	500
Ground feed, tons	800
Pearl barley, tons	500
Horse-power of engines	1,215
Run of stones	51
Foundries and iron works	15
Men employed	1,500
Pig iron used annually, tons	12,000
Bar iron used annually, tons	15,000
Rivets used annually, tons	300
Horse-power	700
Aggregate value	\$3,000,000 00
Fur manufactories	5
Men and women employed	50
Aggregate value	\$250,000 00
Furniture manufactories	23
Men employed	500
Lumber used annually, feet	8,000,000
Aggregate value of manufactures	\$1,700,000 00
Glass works	1
Men employed	125
Furnaces	17
Pots	8
Value of manufactures	\$300,000 00
Glass cutting	3
Men employed	13
Value of manufactures	40,000 00
Gas-meter manufactory	1
Men employed	3
Value	\$10,000 00
Glove manufactories	5
Men and women employed	125
Aggregate value	\$175,000 00
Glue manufactories	2
Men employed	35
Glue made, tons	200
Neat's foot oil, gallons	7,400
Aggregate value	\$150,000 00
Gold and silver refineries	2
Men employed	37
Horse-power of engine	40
Hat and cap manufactories	18
Men employed	150
Aggregate value of manufactures	\$400,000 00
Hose and belting manufactories	5
Men employed	32
Hose made annually, feet	2,500
Belting made annually, feet	140,000
Aggregate value	\$80,000 00
Harness manufactories	3
Men employed	250
Aggregate value	\$350,000 00

SUMMARY OF STATISTICS—Continued.

Ink and mucilage manufactory	1
Men employed	7
Number of dozens made annually	60,000
Value	
Ice manufactory	1
Men employed	6
Tons made annually	2,500
Capital invested	\$50,000 00
Jewelry manufactories	16
Men employed	150
Aggregate value of manufactures	\$500,000 00
Lead and shot manufactory	1
Men employed	130
Lead made, tons }	4,500
Shot made, tons }	
Horse-power engine (2)	100
Aggregate value	\$600,000 00
Linseed oil works	1
Men employed	50
Oil cakes, tons	4,000
Capacity of work per year, gallons	800,000
Value of oil	\$560,000 00
Value of cakes, (tons 30,000)	\$120,000 00
Last manufactories	2
Men employed	10
Horse-power engine	20
Lasts manufactured annually	6,000
Aggregate value	\$27,500 00
Maccaroni and vermacelli manufactories	5
Men employed	43
Maccaroni and pastry made, boxes	120,000
Maccaroni wheat used, sacks	10,000
Horse-power of engine	105
Aggregate value	\$150,000 00
Musical instruments manufactories	4
Men employed	20
Aggregate value	\$64,000 00
Marble works	20
Men employed	350
Aggregate value	\$1,000,000 00
Match factories	8
Men employed	114
Matches made annually, gross	300,000
Value of manufactures	\$525,000 00
Malt houses	6
Men employed	40
Grain malted annually, tons	14,000
Value of products	\$700,000 00
Mirror manufactory	1
Men employed	8
Number of square feet manufactured	25,000
Capital invested	\$150,000 00
Oakum manufactory	1
Men employed	10
Bales made annually	5,000
Aggregate value	\$25,000 00

SUMMARY OF STATISTICS—Continued.

Oil clothing manufactories.....	3
Men employed.....	8
Aggregate value.....	\$30,000 00
Pickle and fruit preserving works.....	9
Men and women employed.....	1,320
Fruit and meat put up—dozen cans.....	300,000
Pickles put up in kegs.....	61,000
Aggregate value.....	\$1,500,000 00
Powder works.....	2
Men employed.....	60
Horse-power engines.....	30
Powder made annually.....	700,000
Value.....	\$400,000 00
Rolling mills.....	1
Men employed.....	375
Horse-power of engine.....	525
Cast iron used, tons.....	None.
Scrap iron used, tons.....	19,930
Coal consumed.....	11,798
Aggregate value of products.....	\$1,009,267 00
Salt works.....	3
Men employed.....	35
Run of stones.....	6
Number of tons annually.....	15,000
Aggregate value of salt ground.....	\$180,000 00
Soda water manufactories.....	6
Men employed.....	52
Aggregate value.....	\$180,000 00
Safe and vault works.....	1
Men employed.....	20
Bar and plate iron used, tons.....	150
Aggregate value of manufactures.....	\$150,000 00
Saw manufactory.....	1
Men employed.....	30
Horse-power engine.....	30
Steel used annually, tons.....	50
Aggregate value saws.....	\$120,000 00
Sash, blind, and door factories.....	17
Men employed.....	1,275
Horse-power of engines.....	1,020
Lumber consumed annually, feet.....	17,000,000
Aggregate value of manufactures.....	\$4,600,000 00
Silverware manufactories.....	3
Men employed.....	50
Aggregate value of manufactures.....	\$150,000 00
Shirt manufactories.....	8
Men and women employed.....	2,000
Aggregate value manufactures.....	\$1,000,000 00
Slipper manufactories.....	18
Men employed.....	750
Value of manufactures.....	\$500,000 00
Soap factories.....	18
Men employed.....	200
Soap made annually, pounds.....	17,210,000
Aggregate value of manufactures.....	\$1,500,000 00

SUMMARY OF STATISTICS—Continued.

Sugar refineries.....	2
Men employed.....	240
Sugar (raw) used, pounds.....	53,000,000
White sugar made.....	24,250,000
Yellow sugar made.....	20,130,000
Syrup made, gallons.....	19,000
Aggregate value manufactures.....	\$5,500,000 00
Tanneries.....	43
Men employed.....	350
Horse-power of engines.....	150
Bark used annually, cords.....	4,500
Hides of all kinds used.....	309,000
Aggregate value of manufactures.....	\$1,345,000 00
Tool manufactories.....	11
Men employed.....	70
Aggregate value.....	\$100,000 00
Type foundries.....	2
Men and women employed.....	46
Aggregate value.....	\$60,000 00
Vinegar manufactories.....	2
Men employed.....	20
Vinegar made annually, gallons.....	700,000
Aggregate value.....	\$180,000 00
Windmill manufactories.....	4
Men employed.....	30
Windmills made annually.....	350
Aggregate value.....	\$100,000 00
Wooden ware manufactories.....	2
Men employed.....	75
Horse-power steam engines.....	150
Aggregate value.....	\$250,000 00
Willowware and basket manufactory.....	1
Men employed.....	6
Value of manufactures.....	\$10,000 00
Woolen mills.....	1
Men and women employed.....	600
Number of power looms.....	130
Cards, setts.....	37
Frames for knitting underwear.....	20
Frames for knitting hosiery.....	50
Spindles.....	13,000
Blankets made annually, pairs.....	100,000
Flannel drawers and underwear, dozens.....	12,000
Hosiery, dozens.....	8,000
Cloth and tweeds, yards.....	400,000
Flannels, yards.....	450,000
Wool used, pounds.....	2,200,000
Aggregate value of manufactures.....	\$1,500,000 00
Wire rope manufactory.....	1
Men employed.....	30
Horse-power of engine.....	100
Amount of wire consumed annually, tons.....	400
Aggregate value.....	\$200,000 00

BIENNIAL REPORT

OF THE

ADJUTANT-GENERAL

OF THE

STATE OF CALIFORNIA.

1875-77.

THE UNIVERSITY OF CHICAGO

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REPORT.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
ADJUTANT-GENERAL'S OFFICE, }
SACRAMENTO, August 1st, 1877. }

To His Excellency,
WILLIAM IRWIN,
Governor and Commander-in-Chief:

SIR: In accordance with the provisions of the Code, relative to the duties of Adjutant-General, I have the honor to submit the following Report for the two years ending July thirty-first, eighteen hundred and seventy-seven.

Having received my appointment on December thirteenth, eighteen hundred and seventy-five, I immediately entered on the duties of my office.

LEGISLATION RELATIVE TO NATIONAL GUARD.

The Legislature then in session gave much attention to the affairs of the National Guard. It repealed the section of the Code providing for a State Armorer, to take effect from January first, eighteen hundred and seventy-six, there being no need for a constant employé in the armory, the State having but little property unissued; and passed an Act (approved March thirtieth, eighteen hundred and seventy-six,) providing for the payment of deficiencies to the National Guard—one of seventeen thousand nine hundred and five dollars for the twenty-fifth fiscal year, and one of fifty-nine thousand nine hundred and twenty-eight dollars for the twenty-sixth and twenty-seventh fiscal years, ending June thirtieth, eighteen hundred and seventy-six.

The claims for the deficiency of the twenty-fifth fiscal year had been audited by the Board of Military Auditors, of which Governor Booth was President, and allowed for the full amount, and so accounted for in my predecessor's report.

The demands against the deficiency appropriation for the twenty-sixth and twenty-seventh fiscal years, have, with the exception of two companies, viz., the Los Angeles Guard and the Nevada Light Guard (which have not, as yet, sent in proper accounts), been audited and allowed by the present Board of Military Auditors for the amount shown in Table "A" of this report. It also reduced the number of companies from forty (40), as was then provided by law, to not to exceed thirty-six (36), the number at that time organized, and the allowances thereto as follows: To infantry and cavalry compa-

nies, fifty dollars per month; and to artillery companies, twenty-five dollars per month for each gun; and annual allowances to all companies of over sixty members, one hundred and fifty dollars, and an amount in proportion to companies of less than sixty members. The allowances to battalion, regimental and brigade headquarters were not changed. This was estimated as a reduction of fifty per cent. The amounts audited and allowed since last report, out of the respective appropriations for Adjutant-General's office, armory rents, and other expenses of the National Guard, will be found in Table "B" of this report.

ORDNANCE AND QUARTERMASTER'S STORES.

On taking charge of the office, no receipt having been required of me by my predecessor, (none, he stated, having been required of him), I had an inventory taken of what property there was in the State Armory, an account of which—together with what has been received and issued since, the amount charged to National Guard and other organizations, showing a total of military property belonging to the State—is given in Table "C" of this report.

CONDITION OF THE SAME.

The property in the State Armory has been thoroughly overhauled, and, so much as is at all serviceable, cleaned, oiled, and aired, and the boxes and packages marked, showing contents and condition.

The property in the possession of the National Guard is generally well cared for, though some of it is much worn and almost useless. The State equipments, in many instances—unless at drill—are not used, companies having purchased equipments for parade out of company funds. Two companies, the Hewston Guard and Oakland Guard, have purchased breech-loaders out of the company allowances and funds.

The property at the State University is reported as not in good condition, no provision being made, either by the State or College authorities, for the cleaning of the same. The property loaned academies is reported in good condition.

The property in possession of independent companies I have been endeavoring to draw in; judging from what has been returned, the little that remains out is not in good condition.

Table "D" of this Report shows the property received and issued—from, and to whom.

Under the head of "In possession of National Guard, etc.," the table shows what has been issued to and charged against companies, etc. It has been usual to credit losses, when they were certified to under oath by the company commander. Some have omitted to do this, and, consequently, have received no credit for losses, and for that reason the property, on an accurate inspection, may fall, in some instances, short of the table from five to ten per cent.

NUMBER AND CONDITION OF THE NATIONAL GUARD AND OF THE ENROLLED MILITIA.

The number of the National Guard will be found in Table "E," of this Report, and of the enrolled militia, in Table "F."

THE FIRST BRIGADE

Has but one company, the Los Angeles Guard, unattached, infantry. I have never seen this company, and can only report of it from returns. It appears to have a large membership, and, under its present commander, is showing signs of a much needed improvement. It is armed with muzzle-loading Springfield rifles, and is uniformed according to the Regulation pattern.

SECOND BRIGADE.

This brigade comprises the principal portion of the National Guard, viz.: three regiments of infantry, of six companies each, one battalion of cavalry, of three companies, one artillery company, and four unattached infantry companies.

Under the efficient command of Brigadier-General John McComb, assisted by his excellent and experienced staff, and the respective organization commanders, this brigade has attained a very advanced standard of merit. On the third and fourth of July of last year your Excellency reviewed this brigade, and witnessed it in the armed exercises, participated in by the United States forces, land and naval, stationed in and about San Francisco, in the celebration of the Centennial. You will also remember the promptness with which it responded to the call made on it during the fire at San Quentin, in February of last year. Within the past week you have again been a witness of its thorough readiness to respond to your commands in the interests of law and order. On Saturday evening last you visited all the armories, and, waiving all formalities of previous announcement, you had a better opportunity of determining what the brigade was, and what might be expected of it in case of necessity. In view, therefore, of your personal observation, I do not deem it necessary to make my report on the Second Brigade as special as I would had you not taken as much pains to see it for yourself.

With the exception of two companies, one cavalry and one infantry, and the facings of the Second Infantry, the brigade is uniformed according to the Regulation pattern, and the infantry, with the exception of two companies, are armed with the breech-loading rifle.

THE THIRD BRIGADE

Has but one infantry company—the Stockton Guard. In numbers, efficiency, and in all that goes to make a good company, this command ranks high in the National Guard. It is uniformed in accordance with regulations, and armed with Springfield breech-loaders.

FOURTH BRIGADE.

This brigade has one battalion of infantry, formed out of the five companies of the Fourth Infantry Regiment, that remained after the muster out of the Sherman Guard. It has, also, one company of artillery. Within the last year, and under command of Brigadier-General Horan, the companies of this command, that I have seen, have shown a marked improvement in every respect, and give promise of future advance. I have not seen the Nevada Light Guard, or the Yuba Light Infantry, but, from reports, I deem them

to be average companies. This command is uniformed according to regulations, and the infantry armed with Springfield breech-loaders.

THE FIFTH BRIGADE

Consists of two companies—the Chico Guard and Siskiyou Guard. The Chico Guard is uniformed according to regulation, and armed, as is also the Siskiyou Guard, with muzzle-loading Springfield rifles. The Chico Guard is an excellent company. The Siskiyou Guard is the youngest organization in the National Guard, not yet completely uniformed, but is creating a fund for that purpose. It was mustered into the National Guard, March twenty-fifth, eighteen hundred and seventy-six.

SIXTH BRIGADE.

This brigade has no organization, save the staff, which has rendered service in collecting and returning arms of some independent organizations, scattered through the northern counties.

SERVICES OF THE NATIONAL GUARD.

On February twenty-eighth, eighteen hundred and seventy-six, on the occasion of the fire at San Quentin, the troops of the Second Brigade were called on to do duty by the civil authorities. The conduct of the troops was prompt and satisfactory.

On July twenty-second, eighteen hundred and seventy-six, the Sheriff of San Joaquin County called for thirty men of the Stockton Guard, "he being informed that certain lawless persons were combining to take from the jail a certain prisoner held by him in lawful custody." The men were immediately furnished, and did duty until all apprehensions of danger passed.

During the month of March, eighteen hundred and seventy-seven, the Chico Guard were mustered and kept under arms, ready to assist the authorities if its services should be required, while a number of prisoners were being removed from Chico to Oroville for trial.

On none of the above mentioned occasions were the troops required to do more than guard and patrol duty.

RIOTOUS DISTURBANCES.

During the last week, owing to the excitement produced by the riotous demonstrations in the East, apprehensions were felt that evil-disposed persons might attempt to create similar disturbances in this State, more particularly in San Francisco and Oakland.

On July twenty-third, requisitions were made by General McComb, commanding Second Brigade, for ten thousands rounds of ammunition; also by Captain Ranlett, Oakland Guard, for two thousand rounds; also by Captain Lehe, Stockton Guard, for one thousand rounds; also by Captain Turner, Chico Guard, for five hundred rounds; all of which were duly approved, and the ammunition supplied.

On Wednesday, the twenty-fifth instant, I accompanied you to San Francisco.

On the evening of the twenty-fifth, you instructed me to receive some arms and ammunition issued by the United States author-

ities, and shipped from Benicia to William T. Coleman, Esq., Chairman of the Committee of Safety, who desired that the State authorities should take charge of the same.

On the arrival of the steamer, close on to midnight, I received the stores from Captain Rexford, ordnance officer, United States Army, and sent under escort to General McComb arms and ammunition for the use of the cavalry and artillery of the Second Brigade, National Guard, and the remainder to the City Hall. Next day, you approved a requisition from the Chief of Police, for the use of special policemen, for one thousand rifles, three hundred carbines, thirty pistols, and ammunition for the respective arms.

You also approved a requisition from General McComb for six hundred rifles and ammunition therefor, for the use of such volunteers as might enroll in the National Guard.

On Saturday, the Chief of Police made another requisition on you for arms. This requisition you did not approve, but advised that if the situation should become so serious that the police force, regular and special, already called into service, should not be equal to the emergency, the National Guard should be called on.

On that evening several companies of the Second Brigade were ordered out on the call of the civil authorities, but nothing of particular moment occurred. In a few days steps will be taken to call in all the arms issued during the last week—to the Chief of Police and to the military—and return them back to the General Government, and have your receipt returned. Also, to have the arms of the State University, that were by your order delivered to the Oakland Guard—it being vacation time at the University—returned.

DRILL AND DISCIPLINE.

Under the present commanding officers, with a very few exceptions, the National Guard has manifested a most commendable spirit of improvement. Regimental, battalion, and company drills have been more regular, parades better attended, inspections more numerous, and the requirements of law and orders more strictly complied with than they have been for some time previous. There are two reasons to which this satisfactory result may be attributed:

First—The apathy in military organizations that followed the passing away of the excitement created and sustained during the war of the rebellion has again yielded to a more active spirit.

Second—The proper and just provisions made by the last Legislature, not only to preserve the National Guard, but to enable it to pay off the indebtedness under which so many organizations labored, have inspired the companies with a desire to render just and faithful service in return. Several companies, at their own expense, have held encampments, others have visited neighboring companies, and in this way some of the indifferent organizations have been stimulated to a most desirable activity.

The system of RE-ENLISTMENTS, which has been vigorously enforced, under your approval, and with the coöperation of the commanding officers, has done much towards making the National Guard a more substantial organization than it has hitherto been. The former system of allowing men, after their first three years had expired, to continue, at their own discretion, in the National Guard, subjected the State to the possibility of having but a very small portion of its

force unquestionably at its command. Now, the oath of enlistment or reënlistment of every man for whom a company asks annual allowance, has to be on file in the Adjutant-General's office, and those oaths represent the strength of the National Guard, and bind their subscribers to the service of the State, without question or reservation, whatever.

RIFLE PRACTICE.

In the National Guard throughout, but more particularly among the infantry companies of San Francisco, rifle practice has attained a creditable degree of excellence. Many of the companies have established permanent ranges, and erected substantial buildings thereat, for the use and convenience of their members. It is creditable to the National Guard of California that it has done all of this voluntarily, as the law does not require more than one day's practice in the year, and the Legislature made no provision whatever for defraying the expense necessarily involved in going to the range, and in the establishing and care of the same, and for the large outlay for the fixed ammunition.

So far, the practice has been at targets placed at measured distances. I would suggest that the men be exercised occasionally in estimating distances, and in regulating their sights therefor. In action, men have to so determine the distance between themselves and those opposing them.

Table G shows the rifle practice of the respective companies for eighteen hundred and seventy-six and eighteen hundred and seventy-seven.

INTER-STATE RIFLE MATCH.

On the twenty-fourth of March last I received a circular from Major-General Franklin Townsend, Adjutant-General of the State of New York, inviting the attendance of a team of twelve (12) from the National Guard of this State, at Creedmoor, New York, to contest for a prize—a statue in bronze of the Soldier of Marathon—presented by the State of New York, “for the purpose of promoting a spirit of friendly rivalry in the most important part of a soldier's duty—the use of the rifle”—to be annually contested for, at Creedmoor, by the marksmen of the uniformed militia of the several States and Territories.

In transmitting General Orders No. 2, C. S., relative to the May target practice, I sent a copy of the invitation to the respective Brigade Commanders.

Meetings under the auspices of the California Rifle Association were called in San Francisco, and resulted in the acceptance of the invitation, and the formation of a committee of the commanding officers of the National Guard, who were instructed to devise ways and means for the selection and necessary expenses and transportation of the team. Competitive matches have been held, open to all the members of the National Guard, and from those making the best scores, through an impartial and exceedingly crucial test, sixteen have been chosen to go to Creedmoor, from which number, after practice there, up to the day of the contest, the twelve to compete will be chosen.

ROSTER, ETC.

The roster of the National Guard will be found under head of Table "H;" list of exempt certificates under Table "I," of resignations and casualties, under Table "J."

COMMISSIONS, WARRANTS, AND CERTIFICATES.

New forms of commission for commissioned officers, of warrants for non-commissioned officers, and of exempt certificates for exempt members of the National Guard, have been adopted, and are being issued. Blanks of all kinds have been regularly supplied to the respective commands. A large number of certificates of service have been issued to California volunteers.

GENERAL AND SPECIAL ORDERS.

Copies of all General Orders, and of important Special Orders, promulgated since last report, are, as usual, appended.

APPLICATIONS

And inquiries relative to forming new companies have been received from the following places: Santa Rosa, Modesto, Red Bluff, San Bernardino, Colusa, Campo, Visalia, Cambria, San Diego, Independence, Compton, Oroville, Crescent City, and Dixon. There are also some independent companies desirous of entering the National Guard. To each a reply has been duly sent that the full number of companies authorized by law are now formed, and that unless the number is increased, or some in service mustered out, there can be no more admitted.

RECOMMENDATIONS.

I would respectfully recommend that our Representatives in Congress be requested to obtain some relief for the State in the amount charged against it for arms, ammunition, and other military property, issued to it in excess of its quota during the civil war. Much was lost in the non-return from companies organized during that exciting period, also by fire, and destruction by water during the floods that occurred in this city. Sworn evidence has been furnished the Ordnance Department that in one fire—the work of an incendiary—that occurred in this city in March, eighteen hundred and sixty-four, property to the amount of nine thousand three hundred and eighty-one dollars and thirty-two cents was destroyed.

Considerable ammunition was expended in rifle practice. Perishable matter and small pieces were used up in ordinary wear and tear.

Out of the issues made to the State from January first, eighteen hundred and sixty-one, to November seventeenth, eighteen hundred and seventy-five, including the one thousand five hundred breech-loaders and the four Gatling guns, amounting to near three hundred thousand dollars, returns have been made from the State back to the Gen-

eral Government which has reduced the State's indebtedness to thirty-two thousand nine hundred and fifty-nine dollars and ninety-eight cents on last mentioned date.

As all property in excess of the State's quota was issued by the General Government for its own maintenance it certainly ought to bear the losses arising from the issuing and non-return to the State of the same.

Both the present and the preceding Chiefs of Ordnance, United States Army, have expressed a similar opinion in their reports to Congress, and have strongly urged that credit be given the States for losses.

Unless some relief, such as is herein suggested, can be obtained through our Representatives the State should make provisions for procuring breech-loaders for the companies without them, and for ammunition, as the time is far in the future when this State can expect to draw on its quota. Its apportionment of the appropriation for the arming of the militia, from the latest data I have, is only two thousand eight hundred and seventy-eight dollars and seventy-one cents per annum, and our indebtedness, arising from issues in excess of quota during the war, was, on November seventeenth, eighteen hundred and seventy-five, according to statement of General Benét Chief of Ordnance, thirty-two thousand nine hundred and fifty-nine dollars and ninety-eight cents.

ALLOWANCE TO NATIONAL GUARD.

The present appropriation is not sufficient by two thousand and sixty-four dollars to pay what is now allowed by law to the National Guard, and hence the Board of Military Auditors had to withhold, at its last meeting, its approval of demands of such companies as it considered could bear the discrimination.

I am of the opinion that our system of allowance needs revision. While provisions are made for the necessary increased expenses of large armories, and for horses for artillery companies, none are made for horses for cavalry companies. They receive but the same allowance as infantry companies—fifty dollars per month.

Companies that parade and drill but the minimum number, and from reports sometimes less, receive as much per month as the most active and energetic. This should be changed, and a more equitable standard of allowances adopted.

An appropriation should be made for expenses of officers and men ordered on special service, and for an annual inspection of property and accounts of companies by the Adjutant-General. I am satisfied that a small outlay for this purpose would result in a large saving to the State, and be of much benefit in keeping companies up to the observance of the law.

Annual or biennial encampments in the respective brigades should be provided for, and each member of the National Guard in constant attendance, and performing duty at the same, should be paid a proper allowance. These encampments should be occasions for rigid instruction. Their influence in familiarizing men with active duty make them an almost indispensable requisite to produce reliable and effective troops.

JURY DUTY.

It is a cause of much complaint among the members of the National Guard that the provision of the Code exempting them from jury duty was repealed. This exemption is allowed in almost all the other States, in return for military service, and in view of the fact that the military are likely to be called upon at any moment, this would seem to be a necessary as well as a just measure. No one, however, should be exempted, unless on a certificate of his company commander that he had attended the required number of drills, and all the legal parades, as well as the applicant's affidavit certifying to the same.

I am of the opinion that the present Code might be amended in several instances so as to make it more applicable to the requirements of the service, and will take pleasure in suggesting those details to the respective Military Committees of the coming Legislature.

REPORTS OF GENERAL OFFICERS.

The report of the Major-General, and the Brigadier-Generals commanding the Second, Third, and Fourth Brigades, also of the Professor of Military Science and Tactics, University of California, are appended to this report, to which I respectfully call your attention.

CONCLUSION.

I have to thank your Excellency for the uniform courtesy extended to me, and for the attention you have given at all times to matters of military interest that I have laid before you; and to express my acknowledgments to the officers having business with me officially for the earnest coöperation they have so ably rendered.

Very respectfully, your obedient servant,

P. F. WALSH,
Adjutant-General.

APPROPRIATIONS AND EXPENDITURES.

TABLE A.—APPROPRIATION FOR DEFICIENCIES,

In armory rent and other expenses of the National Guard, for 26th and 27th Fiscal Years, as per Act, approved March 30th, 1876.

March 30th, 1876—Amount of appropriation-----		\$59,928 00
September 4th, 1876—Allowed headquarters First Cavalry Battalion-----	\$72 00	
September 4th, 1876—Allowed First Light Dragoons, Company "A"-----	1,560 00	
September 4th, 1876—Allowed San Francisco Hussars, Company "B"-----	1,560 00	
September 4th, 1876—Allowed Jackson Dragoons, Company "C"-----	1,560 00	
September 4th, 1876—Allowed National Guard, First Infantry, Company "C"-----	1,560 00	
September 4th, 1876—Allowed Franklin Light Infantry, Company "D"-----	1,560 00	
September 4th, 1876—Allowed Hewston Rifles, Company "H"-----	1,560 00	
September 4th, 1876—Allowed headquarters Second Infantry Regiment-----	144 00	
September 4th, 1876—Allowed Union Guard, Company "A"-----	1,560 00	
September 4th, 1876—Allowed Thompson Rifles, Company "B"-----	1,560 00	
September 4th, 1876—Allowed San Francisco Fusileers, Company "C"-----	1,560 00	
September 4th, 1876—Allowed Germania Rifles, Company "D"-----	1,560 00	
September 4th, 1876—Allowed Steuben Guard, Company "E"-----	1,560 00	
September 4th, 1876—Allowed San Francisco Cadets, Company "H"-----	1,560 00	
September 4th, 1876—Allowed Emmet Guard, Third Infantry, Company "E"-----	1,560 00	
September 4th, 1876—Allowed McMahon Guard, Third Infantry, Company "H"-----	1,560 00	
September 4th, 1876—Allowed Oakland Guard, unattached-----	1,560 00	
September 4th, 1876—Allowed Siskiyou Guard, unattached-----	195 00	
September 11th, 1876—Allowed headquarters First Infantry Regiment-----	144 00	
September 11th, 1876—Allowed City Guard, Company "B"-----	1,560 00	
September 11th, 1876—Allowed Sumner Light Guard, Company "E"-----	1,560 00	
September 11th, 1876—Allowed Light Guard, Company "F"-----	1,560 00	
September 11th, 1876—Allowed Montgomery Guard, Third Infantry, Company "A"-----	1,560 00	
September 11th, 1876—Allowed Shields Guard, Third Infantry, Company "B"-----	1,560 00	
September 11th, 1876—Allowed Wolfe Tone Guard, Third Infantry, Company "C"-----	1,560 00	
September 11th, 1876—Allowed Meagher Guard, Third Infantry, Company "D"-----	1,560 00	
September 11th, 1876—Allowed Yuba Light Infantry, Fourth Infantry, Company "E"-----	1,507 38	
September 11th, 1876—Allowed Chico Guard, unattached-----	910 00	
September 23d, 1876—Allowed First California Guard (Light Artillery)-----	4,680 00	
September 23d, 1876—Allowed Vallejo Rifles, unattached-----	1,560 00	
September 23d, 1876—Allowed Stockton Guard, unattached-----	1,560 00	
September 23d, 1876—Allowed Sarsfield Guard, Fourth Infantry, Company "G"-----	1,560 00	
October 24th, 1876—Allowed headquarters Third Infantry Regiment-----	144 00	
March 5th, 1877—Allowed City Guard, Fourth Infantry, Company "A"-----	1,560 00	
June 13th, 1877—Allowed Hewston Guard, unattached-----	1,525 00	
June 13th, 1877—Allowed San José Zouaves, unattached-----	1,560 00	
June 13th, 1877—Allowed Sacramento Light Artillery, unattached-----	2,013 00	
July 11th, 1877—Allowed Placerville City Guard, Fourth Infantry, Company "D"-----	935 00	
Balance in fund-----	5,538 62	
	\$59,928 00	\$59,928 00

TABLE B.—TWENTY-SEVENTH FISCAL YEAR.

Salary of Adjutant-General.

July 1st, 1875—Amount of appropriation-----		\$3,000 00
Certified to L. H. Foote-----	\$1,375 00	
Certified to P. F. Walsh-----	1,625 00	
	<hr/>	
	\$3,000 00	\$3,000 00

Salary of Assistant Adjutant-General.

July 1st, 1875—Amount of appropriation-----		\$2,000 00
Certified to Wm. E. McArthur-----	\$883 30	
Certified to Geo. E. Aiken-----	1,088 88	
Balance in fund-----	27 82	
	<hr/>	
	\$2,000 00	\$2,000 00

Postage and Expressage.

July 1st, 1875—Amount of appropriation-----		\$200 00
September 20th, 1875—Certified to L. H. Foote, Adjutant-General-----	\$75 00	
November 15th, 1875—Certified to L. H. Foote, Adjutant-General-----	75 00	
February 7th, 1876—Certified to W. C. Hopping, Postmaster-----	16 00	
April 17th, 1876—Certified to Wells, Fargo & Co.'s Express-----	24 45	
June 29th, 1876—Certified to W. C. Hopping, Postmaster-----	9 55	
	<hr/>	
	\$200 00	\$200 00

Cleaning, Repairing, and Transporting Arms.

July 1st, 1875—Amount of appropriation-----		\$750 00
July 5th, 1875—Certified to Jo. Davis-----	\$395 61	
July 19th, 1875—Certified to Wells, Fargo & Co.'s Express-----	32 30	
July 19th, 1875—Certified to Central Pacific Railroad Company-----	51 00	
September 6th, 1875—Certified to Jo. Davis & Co.-----	83 00	
October 18th, 1875—Certified to Wells, Fargo & Co.'s Express-----	35 60	
October 18th, 1875—Certified to Jo. Davis & Co.-----	76 45	
November 15th, 1875—Certified to Oscar Van Alstein-----	34 50	
December 1st, 1875—Certified to Wells, Fargo & Co.'s Express-----	12 55	
February 7th, 1876—Certified to Central Pacific Railroad Company-----	12 00	
June 7th, 1876—Certified to Central Pacific Railroad Company-----	7 90	
June 25th, 1876—Certified to John Perry, drayman-----	9 09	
	<hr/>	
	\$750 00	\$750 00

Salary of Armorer.

July 1st, 1875—Amount of appropriation-----		\$1,800 00
July 31st, 1875—Certified to W. L. Hawkins-----	\$150 00	
August 31st, 1875—Certified to W. L. Hawkins-----	150 00	
September 30th, 1875—Certified to W. L. Hawkins-----	150 00	
October 31st, 1875—Certified to W. L. Hawkins-----	150 00	
November 30th, 1875—Certified to W. L. Hawkins-----	150 00	
December 31st, 1875—Certified to W. L. Hawkins-----	150 00	
Balance in fund-----	900 00	
	<hr/>	
	\$1,800 00	\$1,800 00

Rent of Armory.

July 1st, 1875—Amount of appropriation for 26th and 27th fiscal years-----		\$2,400 00
Balance in fund-----	\$2,400 00	
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	\$2,400 00	\$2,400 00

Contingent Expenses, including Pay of Porter.

July 1st, 1875—Amount of appropriation-----		\$300 00
July 31st, 1875—Certified to L. H. Foote-----	\$25 00	
August 31st, 1875—Certified to L. H. Foote-----	25 00	
September 30th, 1875—Certified to L. H. Foote-----	25 00	
October 31st, 1875—Certified to L. H. Foote-----	25 00	
November 30th, 1875—Certified to L. H. Foote-----	25 00	
December 31st, 1875—Certified to L. H. Foote-----	12 50	
December 31st, 1875—Certified to P. J. Harney-----	12 50	
	<hr/>	
Amount carried forward-----	\$150 00	\$300 00

Amount brought forward.....	\$150 00	\$300 00
January 31st, 1876—Certified to P. J. Harney.....	25 00	
February 28th, 1876—Certified to P. J. Harney.....	25 00	
March 31st, 1876—Certified to P. J. Harney.....	25 00	
April 30th, 1876—Certified to P. J. Harney.....	25 00	
May 31st, 1876—Certified to P. J. Harney.....	25 00	
June 30th, 1876—Certified to P. J. Harney.....	25 00	
	<hr/>	<hr/>
	\$300 00	\$300 00

Amount allowed to National Guard for the balance of the 26th fiscal year, and allowances of the 27th fiscal year, and other expenses, audited by Board of Military Auditors, out of appropriation for the 26th and 27th fiscal years 1874-5-6, and out of Military Fund.

Amount of appropriation unexpended.....		\$31,470 16
Paid out of Military Fund.....		378 77
To Second Brigade Headquarters.....	\$936 00	
To Third Brigade Headquarters.....	36 00	
To Fourth Brigade Headquarters.....	214 00	
To Fifth Brigade Headquarters.....	45 00	
To First Infantry Regiment Headquarters.....	144 00	
To Second Infantry Regiment Headquarters.....	144 00	
To Third Infantry Regiment Headquarters.....	144 00	
To Fourth Infantry Regiment Headquarters.....	150 00	
To First Cavalry Battalion Headquarters.....	90 00	

First Cavalry Battalion.

To First Light Dragoons, Company "A".....	805 00
To San Francisco Hussars, Company "B".....	825 00
To Jackson Dragoons, Company "C".....	825 00

Artillery Companies.

To First California Guard.....	1,505 00
To Sacramento Light Artillery.....	1,140 00

First Infantry Regiment.

To City Guard, Company "B".....	720 00
To National Guard, Company "C".....	720 00
To Franklin Light Infantry, Company "D".....	720 00
To Sumner Light Guard, Company "E".....	720 00
To Light Guard, Company "F".....	720 00
To Hewston Rifles, Company "H".....	720 00

Second Infantry Regiment.

To Union Guard, Company "A".....	720 00
To Thompson Rifles, Company "B".....	825 00
To San Francisco Fusileers, Company "C".....	720 00
To Germania Rifles, Company "D".....	720 00
To Steuben Guard, Company "E".....	720 00
To San Francisco Cadets, Company "H".....	720 00

Third Infantry Regiment.

To Montgomery Guard, Company "A".....	720 00
To Shields Guard, Company "B".....	720 00
To Wolfe Tone Guard, Company "C".....	720 00
To Meagher Guard, Company "D".....	720 00
To Emmet Guard, Company "E".....	720 00
To McMahon Guard, Company "H".....	720 00

Fourth Infantry Regiment.

To City Guard, Company " A "	690 00	
To Nevada Light Guard, Company " C "	720 00	
To Placerville City Guard, Company " D "	1,020 00	
To Yuba Light Infantry, Company " E "	720 00	
To Sarsfield Guard, Company " G "	720 00	
Amount carried forward	\$23,938 00	\$31,848 93

Amount brought forward.....	\$23,938 00	\$31,848 93
<i>Unattached Companies.</i>		
To Oakland Guard.....	825 00	
To Vallejo Rifles.....	720 00	
To Hewston Guard.....	720 00	
To San José Zouaves.....	640 00	
To Stockton Guard.....	720 00	
To Los Angeles Guard.....	720 00	
To Chico Guard.....	720 00	
To Siskiyou Guard.....	105 00	
To labor and material at State Armory to January 1st, 1876.....	501 66	
To miscellaneous to January 1st, 1876.....	248 70	
Balance in fund.....	1,990 57	
	<hr/>	<hr/>
	\$31,848 93	\$31,848 93

TWENTY-EIGHTH FISCAL YEAR.

Salary of Adjutant-General.

July 1st, 1876—Amount of appropriation.....		\$2,000 00
Certified to P. F. Walsh.....	\$3,000 00	
	<hr/>	<hr/>
	\$3,000 00	\$3,000 00

Salary of Assistant Adjutant-General.

July 1st, 1876—Amount of appropriation.....		\$2,000 00
Certified to Geo. E. Aiken.....	\$2,000 00	
	<hr/>	<hr/>
	\$2,000 00	\$2,000 00

Pay of Porter.

July 1st, 1876—Amount of appropriation.....		\$300 00
Certified to P. J. Harney.....	\$300 00	
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	\$300 00	\$300 00

Postage, Expressage.

July 1st, 1876—Amount of appropriation.....		\$100 00
July 17th, 1876—Certified to W. C. Hopping, Postmaster.....	\$27 39	
December 4th, 1876—Certified to P. F. Walsh—postage and telegraphing.....	20 00	
January 15th, 1877—Certified to Wells, Fargo & Co.'s Express.....	11 70	
March 28th, 1877—Certified to P. F. Walsh—postage and telegraphing.....	20 00	
May 7th, 1877—Certified to Wells, Fargo & Co.'s Express.....	3 10	
June 13th, 1877—Certified to P. F. Walsh—postage and telegraphing.....	17 81	
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	\$100 00	\$100 00

Cleaning and Transportation of Arms.

July 1st, 1876—Amount of appropriation.....		\$750 00
August 21st, 1876—Certified to John Perry, drayman.....	\$5 00	
August 21st, 1876—Certified to P. J. Harney.....	42 50	
December 4th, 1876—Certified to Giraud & Pitcher.....	2 50	
January 15th, 1877—Certified to P. J. Harney.....	35 00	
March 28th, 1877—Certified to P. J. Harney.....	40 00	
June 13th, 1877—Certified to P. F. Walsh, paid freight.....	26 75	
June 13th, 1877—Certified to R. Stone & Co.....	8 00	
June 13th, 1877—Certified to John Perry.....	8 40	
June 13th, 1877—Certified to P. J. Harney.....	50 00	
July 2d, 1877—Certified to Huntington, Hopkins & Co.....	55 30	
July 11, 1877—Certified to Wells, Fargo & Co's Express.....	5 60	
July 11, 1877—Certified to P. J. Harney.....	47 50	
July 11, 1877—Certified to John Perry.....	6 50	
Balance in fund.....	416 95	
	<hr/>	<hr/>
	\$750 00	\$750 00

Amount allowed to National Guard for 28th fiscal year, 1876-7.

Amount of appropriation.....		\$30,000 00
To Second Brigade Headquarters.....	\$936 00	
To Third Brigade Headquarters.....	36 00	
To Fourth Brigade Headquarters.....	180 00	
To Fifth Brigade Headquarters.....	72 00	
To First Infantry Regiment Headquarters.....	216 00	
To Second Infantry Regiment Headquarters.....	216 00	
To Third Infantry Regiment Headquarters.....	216 00	
To Fourth Infantry Regiment Headquarters.....	90 00	
To First Cavalry Battalion Headquarters.....	108 00	
<i>First Cavalry Battalion.</i>		
To First Light Dragoons, Company "A".....	725 00	
To San Francisco Hussars, Company "B".....	750 00	
To Jackson Dragoons, Company "C".....	725 00	
<i>Artillery Companies.</i>		
To First California Guard.....	1,950 00	
To Sacramento Light Artillery.....	1,200 00	
<i>First Infantry Regiment.</i>		
To City Guard, Company "B".....	750 00	
To National Guard, Company "C".....	600 00	
To Franklin Light Infantry, Company "D".....	750 00	
To Sumner Light Guard, Company "E".....	750 00	
To Light Guard, Company "F".....	725 00	
To Hewston Rifles, Company "H".....	750 00	
<i>Second Infantry Regiment.</i>		
To Union Guard, Company "A".....	750 00	
To Thompson Rifles, Company "B".....	740 00	
To San Francisco Fusileers, Company "C".....	750 00	
To Germania Rifles, Company "D".....	750 00	
To Steuben Guard, Company "E".....	750 00	
To San Francisco Cadets, Company "F".....	750 00	
<i>Third Infantry Regiment.</i>		
To Montgomery Guard, Company "A".....	750 00	
To Shields Guard, Company "B".....	750 00	
To Wolfe Tone Guard, Company "C".....	750 00	
To Meagher Guard, Company "D".....	737 50	
To Emmet Guard, Company "E".....	750 00	
To McMahon Guard, Company "H".....	750 00	
<i>First Battalion of Infantry.</i>		
To City Guard, Company "A".....	750 00	
To Nevada Light Guard, Company "C".....	600 00	
To Placerville City Guard, Company "D".....	600 00	
To Yuba Light Infantry, Company "E".....	600 00	
To Sarsfield Guard, Company "G".....	750 00	
<i>Unattached Companies.</i>		
To Oakland Guard.....	750 00	
To Vallejo Rifles.....	750 00	
To Hewston Guard.....	600 00	
To San José Zouaves.....	600 00	
To Stockton Guard.....	750 00	
To Los Angeles Guard.....	750 00	
To Chico Guard.....	750 00	
To Siskiyou Guard.....	300 00	
Balance in Fund.....	727 50	
	\$30,000 00	\$30,000 00

STATE OF CALIFORNIA,
County of Sacramento, } ss.

P. F. Walsh, Adjutant-General, being duly sworn, says that the amounts certified to in the foregoing tables, under head of postage, expressage, and cleaning and transportation of arms from December 15th, 1875, to August 1st, 1877, were expended for the purposes above mentioned.

P. F. WALSH.

[SEAL.] Subscribed and sworn to before me, this 1st day of August, A. D. 1877.

JOHN P. POOLE,
Deputy Clerk Supreme Court.

MILITARY PROPERTY OF THE STATE.

TABLE C.

Military Property of the State.

	In State Armory, January 1st, 1876-----	Received since January 1st, 1876-----	Issued since January 1st, 1876-----	Total in State Armory, August 1st, 1877-----	In possession of National Guard-----	In possession of Colleges and Independent Companies-----	Total Military Property of the State of California-----
Parrot guns, 10 lbs-----					6		6
Guns, 6 lbs-----					2		2
Howitzers, 12 lbs-----					2		2
Caissons-----					10		10
Axes (felling)-----					4		4
Sponge buckets-----					10		10
Tar buckets-----					16		16
Water buckets-----					12		12
Gunner's gimlets-----					8		8
Gunner's primers-----					250		250
Gunner's haversacks-----					16		16
Handspikes-----					26		26
Wheel harness-----					22		22
Lead harness-----					36		36
Lanyards-----					16		16
Lint stocks-----					4		4
Vent covers-----					10		10
Priming wire-----					16		16
Prolongs-----					10		10
Tarpaulins-----					16		16
Tangent scales-----					10		10
Thumb stalls-----					3		3
Tow hooks-----					10		10
Tube pouches-----					16		16
Sponges and rammers-----					19		19
Vent punches-----					9		9
Wormers-----					4		4
Shovels-----					6		6
Spare poles-----					4		4
Spare wheels-----					10		10
Forge-----					1		1
Battery wagon-----					1		1
Gatling guns, cal. 45-----					4		4
Gatling gun carriages-----					4		4
Gatling gun beds and frames-----					4		4
Adjusting screw wrenches-----					4		4
Clamps for worm gear-----					4		4
Feed cases, tin-----					192		192
Gun covers-----					4		4
Lock screw drivers-----					4		4
Oscillators-----					4		4
Padlocks, brass, with chains-----					12		12
Pin wrenches-----					4		4
Rear guide nut wrenches-----					4		4
Shell drivers-----					4		4
Small screw drivers-----					4		4
Large screw drivers-----					4		4
Wiping rods, brass-----					4		4
Springfield r. muskets, cal. 45-----	4	30	30	4	1,488		1,492
Bayonets-----	4	30	30	4	1,486		1,490
Screw-drivers-----	47			47	1,349		1,396
Tumbler punches-----	8			8	274		282
Spring vises-----	3			3	57		60
Breech block cup screws-----	12			12	326		338

TABLE C—Continued.

	In State Army Janu- ary 1st, 1876-----	Received since January 1st, 1876-----	Issued since January 1st, 1876-----	Total in State Army August 1st, 1877-----	In possession of National Guard-----	In possession of Colleges and Independent Com- panies-----	Total Military Property of the State of Califor- nia-----
Cam latch springs-----	12			12	342		354
Ejector springs-----	12			12	343		355
Extractors-----	5			5	133		138
Firing pins-----	13			13	332		345
Firing pins, screws-----	12			12	343		355
Firing pins, springs-----	12			12	333		345
Main springs-----	13			13	339		352
Sear springs-----	13			13	342		355
Tumbler screws-----	13			13	342		355
Arm chests-----	28	9	5	32	63		95
Springfield muskets, cal. 58-----	5	164	55	114	435	226	775
Muskets (smooth bore), cal. 69-----	233	9	40	202	40		242
Muskatoons-----						25	25
Muskets (flint locks), cal. 69-----	20			20			20
Bayonets-----	231	170	95	306	473	231	1,010
Muskets (Harper's Ferry) cali- ber 54-----	40			40		40	80
Bayonets (sword)-----	2			2		40	42
Whitney rifles, cal 54-----	248			248			248
Bayonet scabbards-----	44	273	95	222	2,379	225	2,826
Bayonet scabbards (sword)-----	38			38			38
Cartridge boxes and plates-----	83	330	95	318	2,161	294	2,773
Cartridge box belts and plates-----	59	76		135	1,261	210	1,606
Waist belts and plates-----	29	336	95	270	2,105	293	2,668
Waist belts and plates (Harper's Ferry)-----	40			40			40
Cap boxes and picks-----	119	323	95	347	1,316	271	1,934
Gun slings-----	140	73	95	118	1,822	250	2,190
Screw-drivers-----	99	41	67	73	877	198	1,148
Wipers-----	160	32	75	117	687	107	911
Tompions-----	129	78	55	152	1,379	235	1,766
Extra cones-----	142	95	55	182	697	96	975
Tumbler punches-----	22	39	11	50	228		278
Ball screws-----	11	10	4	17	126	27	170
Spring vises-----	14	5	5	14	54	27	95
Swedges-----					1	22	23
Sergeants' swords-----					37	6	43
Sergeants' sword belts and plates-----					19		19
Extra main-springs-----	40	23	14	49	175	50	274
Extra sear springs-----	46	31	14	63	169	50	282
Extra tumbler screws-----	42	12	14	40	99	50	189
Bullet moulds-----						4	4
Arm chests-----					46	11	57
Ball cartridges, rounds, cal. 45-----	26,000		11,000	15,000			
Ball cartridges, rounds, cal. 58-----	4,400		3,500	900			
Ball cartridges, rounds, cal. 54-----	1,000			1,000			1,000
Sabres-----		79		79	284		363
Scabbards-----		79		79	306		385
Belts and plates-----		75		75	259		334
Knots-----		79		79	188		267
Colt's pistols-----		71		71	116		187
Starr's pistols-----					22		22
Holsters-----	4	69		73	116		189
Screw drivers-----	11	11		22	88		110
Wrenches-----	11			11			11
Extra cones-----					50		50

TABLE C—Continued.

	In State Armory, January 1st, 1876	Received since January 1st, 1876	Issued since January 1st, 1876	Total in State Armory August 1st, 1877	In possession of National Guard	In possession of Colleges and Independent Companies	Total Military Property of the State of California
Bullet moulds	10	22		32	57		89
Saddles	54			54	223		277
Saddle covers					28		28
Saddle bags	15			15			15
Saddle blankets					14		14
Bridles	268			268	244		512
Halters	26			26			26
Breast straps and plates	162			162	200		362
Martingales	107			107			107
Uniform coats	287			287	620		907
Uniform jackets	86			86			86
Uniform pants	27			27	634		661
Uniform caps	28			28			28
Uniform hats	170	30		200	368		568
Wall tents	50	19	16	53	13		66
Wall tent flies	40	42	16	66	5		71
Sibley tents	80	3		83	12		95
Hospital tents	3			3			3
Hospital tent flies	3			3			3
Tent poles (sets)	107	20	20	107	12		119

TABLE D.

List of ordnance, ordnance stores, etc., received since January 1st, 1876, and from whom.

January 6th, 1876—General John Hewston, late commander 2d Brigade, N. G.: 2 wall tents and flies, 2 Sibley tents.

May 20th, 1876—Captain James Armstrong, commanding Hewston Guard (unattached), 2d Brigade, N. G.: 60 Springfield muskets, cal. 58; 58 bayonets, 51 bayonet scabbards, 47 cartridge boxes (no plates), 90 waist belts, 36 waist belt plates, 60 cap boxes and picks, 16 screw drivers, 4 wipers, 45 tompons, 58 extra cones, 22 tumbler punches, 11 extra main-springs, 15 extra sear springs, 12 extra tumbler screws, 30 uniform hats, 3 arm chests, 2 boxes.

June 10th, 1876—Captain L. E. Lyon, commanding Stockton Guard (unattached), 3d Brigade: 3 wall tents, 8 flies, 30 poles.

June 30th, 1876—Captain George Humphrey, commanding Co. "C," 1st Infantry: 32 bayonet scabbards, 80 cartridge boxes and plates, 71 waist belts and plates, 80 cap boxes and picks.

June 30th, 1876—Major D. W. Laird, Ordnance Officer 2d Brigade, N. G.: 5 Springfield muskets, cal. 58; 5 bayonets, 9 smooth-bore muskets, 8 smooth-bore musket bayonets.

January 17, 1877—Captain J. W. Guthrie, commanding Co. "A," 4th Infantry: 20 Springfield muskets, cal. 58; 20 bayonets, 20 bayonet scabbards, 20 cartridge boxes and plates, 20 waist belts and plates, 20 cap boxes and picks.

April 14th, 1877—Captain John A. Rapp, commanding Co. "C," 1st Battalion of Infantry: 10 Springfield r. muskets, cal. 45, m. 1873; 10 bayonets, 1 arm chest.

April 15th, 1877—Captain George F. McDonald, commanding Co. "D," 1st Battalion of Infantry: 10 Springfield r. muskets, cal. 45, m. 1873; 10 bayonets, 1 arm chest.

April 17th, 1877—Captain J. P. Brown, commanding Co. "E," 1st Battalion of Infantry: 10 Springfield r. muskets, cal. 45, m. 1873; 10 bayonets, 1 arm chest.

April 28th, 1877—Captain C. A. Laufkotter, commanding Co. "G," 1st Battalion of Infantry: 30 Springfield muskets, cal. 58, m. 1862; 30 bayonets, 52 bayonet scabbards, 54 cartridge boxes and plates, 22 cartridge boxes (no plates), 58 waist belts and plates, 41 cap boxes and picks, 28 gun slings.

June 13, 1877—Brigadier General J. G. Wall, commanding 6th Brigade, N. G.: 49 Springfield muskets, cal. 58, m. 1862; 49 bayonets, 49 bayonet scabbards, 47 cartridge boxes and plates, 30 waist belts and plates, 42 cap boxes and picks, 45 gun slings, 25 screw-drivers, 28 wipers, 33 tompons, 37 extra cones, 17 tumbler punches, 10 ball screws, 5 spring vises, 12 extra main-springs, 16 extra sear springs, 4 wall tents, 98 tent pins.

N. B.—The above arms, etc., were in possession of the Crescent City Guard (independent).

June 13th, 1877—Brigadier General J. G. Wall, commanding 6th Brigade, N. G.: 79 sabers, 79 scabbards, 75 belts and plates, 79 knots, 71 Colt's pistols, 69 pistol holsters, 11 screw-drivers, 22 bullet moulds, 3 boxes.

N. B.—The above arms, etc., were in possession of the Smith River Independent Riflemen (independent).

June 30th, 1877—H. A. Plate, late Captain Co. "B," 1st Infantry: 69 bayonet scabbards, 70 cartridge boxes and plates, 76 cartridge box belts and plates, 67 waist belts and plates, 80 cap boxes and picks, 10 cartridge boxes without plates, 1 box.

July 7th, 1877—West Side Irrigation Commission, 10 wall tents, 1 Sibley tent, 10 flies, 39 poles.

TABLE D—Continued.

List of ordnance, ordnance stores, etc., issued since January 1st, 1876, and to whom.

April 29th, 1876—Captain Wm. T. Turner commanding Chico Guard (unattached), 5th Brigade, N. G.: 500 rounds ball cartridges, cal. 58, m. 1862; 1 box.

May 3d, 1876—Captain L. E. Lyon, commanding Stockton Guard (unattached), 3d Brigade, N. G.: 4 wall tents, 4 flies, 24 poles.

June 2d, 1876—Captain John V. Brown commanding Siskiyou Guard (unattached), 5th Brigade, N. G.: 55 Springfield muskets, cal. 58, m. 1862; 55 bayonets, 55 bayonet scabbards, 55 cartridge boxes and plates, 55 waist belts and plates, 55 cap boxes and picks, 55 gun slings, 55 screw drivers, 55 wipers, 55 tompons, 55 extra cones, 11 tumbler punches, 4 ball screws, 3 spring vises, 14 extra main-springs, 14 extra sear springs, 14 extra tumbler screws, 1,000 rounds ball cartridges, cal. 58, 3 arm chests, 1 box.

June 22d, 1876—Captain William T. Turner, commanding Chico Guard (unattached), 5th Brigade, N. G.: 40 smooth-bore muskets, cal. 69; 40 bayonets, 40 gun slings, 12 screw drivers, 20 wipers, 2 spring vises, 2 arm chests.

June 28th, 1876—Captain William T. Turner, commanding Chico Guard (unattached), 5th Brigade, N. G.: 35 bayonet scabbards, 35 cartridge boxes and plates, 35 waist belts and plates, 35 cap boxes and picks, 1 box.

August 23d, 1876—West Side Irrigation Commission: 12 wall tents, 12 flies, 36 poles.

February 17th, 1877—Captain William T. Turner, commanding Chico Guard (unattached), 5th Brigade, N. G.: 5 bayonet scabbards, 5 cartridge boxes and plates, 5 waist belts and plates, 5 cap boxes and picks.

April 28th, 1877—Captain C. A. Laufkotter, commanding Co. "G," 1st Battalion of Infantry: 30 Springfield rifle muskets, cal. 45, m. 1873; 30 bayonets.

July 25th, 1877—Brigadier-General John McComb, commanding 2d Brigade, N. G.: 10,000 rounds ball cartridges, cal. 45, m. 1873; 2,000 rounds ball cartridges, cal. 58, m. 1862.

July 25th, 1877—Captain Eugene Lehe, commanding Stockton Guard (unattached), 3d Brigade, N. G.: 1,000 rounds ball cartridges, cal. 45, m. 1873.

July 25th, 1877—Captain William T. Turner, commanding Chico Guard (unattached), 5th Brigade, N. G.: 500 round ball cartridges, cal. 58, m. 1862; 1 box.

Annual Return of the National Guard.

TABLE E.

Annual Return of the National Guard, compiled from the reports of September 9th, 1876.

LOCALITY.	Staff of the Commander-in-Chief	Number of Companies	Major-Generals	Brigadier-Generals	Adjutant-General's Department	Inspector-General's Department	Judge Advocate's Department	Quartermaster's Department	Subsistence Department	Medical Department	Pay Department	Engineer's Department	Ordnance Department	Aids-de-Camp	Non-commissioned Officers	Aggregate
Sacramento	Staff of the Commander-in-Chief				1		1			1	1	1		6		11
San Francisco	Adjutant-General's Department				1		1			1	1	1	1	2		1
Los Angeles	Major-General Commanding National Guard and Staff	1	1	1	1	1	1	1	1	1	1	1	1	1		12
San Francisco	Brigadier-General Commanding First Brigade and Staff	26		1	1	1	1	1	1	1	1	1	1	1	2	11
Stockton	Brigadier-General Commanding Second Brigade and Staff			1	1	1	1	1	1	1	1	1	1	1		13
Sacramento	Brigadier-General Commanding Third Brigade and Staff	1		1	1	1	1	1	1	1	1	1	1	1	1	10
Red Bluff	Brigadier-General Commanding Fourth Brigade and Staff	6		1	1	1	1	1	1	1	1	1	1	1		11
Crescent City	Brigadier-General Commanding Fifth Brigade and Staff	2		1	1	1	1	1	1	1	1	1	1	1		11
	Brigadier-General Commanding Sixth Brigade and Staff			1	1	1	1	1	1	1	1	1	1	1		11
	Totals	36	1	6	8	7	8	7	7	7	8	8	7	13	3	90

TABLE E—Continued.

LOCALITY.	Colonels	Lieutenant-Colonels	Majors	Adjutants	Regimental Quarter- masters	Regimental Commissa- ries	Regimental Paymasters	Regimental Assistant Surgeons	Regimental Chaplains	Captains	First Lieutenants	Second Lieutenants	Non-commissioned Of- ficers and Musicians	Privates	Aggregate
Vallejo										1	1	1	15	50	68
San Francisco										1	2	2	13	46	64
San Francisco			1	1	1	1	1	1							6
	Vallejo Rifles (unattached)														
	First California Guard														
	First Cavalry Battalion														
	Company "A," First Light Dragoons									1	1	2	12	44	60
	Company "B," San Francisco Hussars									1	1	2	12	46	62
	Company "C," Jackson Dragoons									1	1	2	10	42	56
	<i>Third Brigade.</i>														
Stockton	Stockton Guard (unattached)									1	1	1	15	41	59
	<i>Fourth Brigade.</i>														
	Fourth Infantry Regiment														
Sacramento	Company "A," City Guard		1	1	1	1		1		1	1	1	16	43	5
Nevada City	Company "C," Nevada Light Guard									1	1	1	16	37	62
Placerville	Company "D," Placerville City Guard									1	1	1	18	54	76
Campdonville	Company "E," Yuba Light Infantry									1	1	1	18	54	75
Sacramento	Company "G," Sarsfield Guard									1	1	1	16	46	67
Sacramento	Sacramento Light Artillery									1	2	2	14	65	84
	<i>Fifth Brigade.</i>													50	69
Chico	Chico Guard (unattached)									1	1	1	15	44	62
Yreka	Siskiyou Guard (unattached)									1	1	1	17	56	76
	From page 26	2	3	5	5	5	4	5	2	35	37	41	533	1,825	2,507
	Totals	2	3	5	5	5	4	5	2	35	37	41	533	1,825	2,507

TABLE F.

Enrolled Militia of California, for the years 1875 and 1876.

COUNTIES.	Number enrolled in 1875.	Number enrolled in 1876.	COUNTIES.	Number enrolled in 1875.	Number enrolled in 1876.
Alameda *	8,907	2,574	Sacramento	5,133	5,527
Alpine	164	146	San Benito	922	720
Amador	2,312	2,365	San Bernardino	647	1,317
Butte	2,036	2,075	San Diego †	2,146	-----
Calaveras	714	928	San Francisco	14,420	14,989
Colusa	2,294	1,443	San Joaquin	3,194	3,840
Contra Costa	2,169	1,971	San Luis Obispo	982	1,260
Del Norte	311	272	San Mateo	1,508	1,976
El Dorado	2,119	1,770	Santa Barbara	1,407	1,209
Fresno	916	1,290	Santa Clara	2,105	1,708
Humboldt	1,625	2,168	Santa Cruz	2,033	2,190
Inyo	604	575	Shasta	584	775
Kern	1,454	1,180	Sierra	988	882
Lake	2,275	802	Siskiyou	1,724	1,297
Lassen	480	449	Solano	3,244	2,158
Los Angeles	4,453	5,493	Sonoma	1,610	2,385
Marin	1,580	1,652	Stanislaus	1,358	1,401
Mariposa	698	602	Sutter	1,036	790
Mendocino	2,427	2,860	Tehama	1,207	1,254
Merced	1,537	1,572	Trinity	542	494
Modoc	495	617	Tulare	1,009	1,331
Mono	252	302	Tuolumne	963	784
Monterey	1,445	2,050	Ventura	487	712
Napa	1,787	1,055	Yolo	1,633	1,394
Nevada	3,309	3,360	Yuba	1,481	1,683
Placer	2,515	2,240			
Plumas	696	550	Totals	101,937	94,437

* Alameda County does not include Oakland for 1876.

† No report from San Diego County for 1876.



CONSOLIDATED REPORT

OF

TARGET PRACTICE.

TABLE G.

Consolidated report of target practice, held during the month of May, 1876—Distance, 200 yards for breech-loaders, 150 for muzzle-loaders, and 30 for pistols—Size of target, 6 feet by 4.

NAME OF COMPANY.	Regiment or Battalion	Brigade	Style of Arms	Number of Men Firing.	Number of Points Possible to be Made	Number of Points Made	Company Percentage
Los Angeles Guard, (unattached)	First Infantry	First	Springfield rifle, m. l. cal. 58	32	800	97	12.12
City Guard, Company "B"	First Infantry	Second	Springfield rifle, b. l. cal. 45	44	1,100	439	39.90
National Guard, Company "C"	First Infantry	Second	Springfield rifle, b. l. cal. 45	54	1,350	760	56.29
Franklin Light Infantry, Company "D"	First Infantry	Second	Springfield rifle, b. l. cal. 45	42	1,050	484	46.09
Sunmer Light Guard, Company "E"	First Infantry	Second	Springfield rifle, b. l. cal. 45	52	1,300	874	67.23
Light Guard, Company "F"	First Infantry	Second	Springfield rifle, b. l. cal. 45	39	975	406	41.64
Hewston Rifles, Company "H"	First Infantry	Second	Springfield rifle, b. l. cal. 45	35	875	260	29.71
Union Guard, Company "A"	Second Infantry	Second	Springfield rifle, b. l. cal. 45	52	1,300	805	61.92
Thompson Rifles, Company "B"	Second Infantry	Second	Springfield rifle, b. l. cal. 45	38	950	293	30.84
San Francisco Fusileers, Company "C"	Second Infantry	Second	Springfield rifle, b. l. cal. 45	56	1,400	656	46.85
Germania Rifles, Company "D"	Second Infantry	Second	Springfield rifle, b. l. cal. 45	29	725	338	46.62
Steuben Guard, Company "E"	Second Infantry	Second	Springfield rifle, b. l. cal. 45	42	1,050	454	43.23
San Francisco Cadets, Company "H"	Second Infantry	Second	Springfield rifle, b. l. cal. 45	44	1,100	502	45.63
Montgomery Guard, Company "A"	Third Infantry	Second	Springfield rifle, b. l. cal. 45	50	1,250	695	55.6
Shields Guard, Company "B"	Third Infantry	Second	Springfield rifle, b. l. cal. 45	38	950	531	55.89
Wolfe Tone Guard, Company "C"	Third Infantry	Second	Springfield rifle, b. l. cal. 45	52	1,300	831	63.92
Meagher Guard, Company "D"	Third Infantry	Second	Springfield rifle, b. l. cal. 45	42	1,050	418	39.80
Emmet Guard, Company "E"	Third Infantry	Second	Springfield rifle, b. l. cal. 45	49	1,225	547	44.65
McMahon Guard, Company "H"	Third Infantry	Second	Springfield rifle, b. l. cal. 45	32	800	357	44.62
San José Zouaves, (unattached)	Second	Second	Springfield rifle, m. l. cal. 58	35	875	335	40.57
Hewston Guard, (unattached)	Second	Second	Springfield rifle, b. l. cal. 50	37	925	366	39.56

Oakland Guard, (unattached)	Second.	Springfield rifle, m. l., cal. 58.	40	1,000	444	44.4
Vallejo Rifles, (unattached)	Second.	Springfield rifle, m. l., cal. 58.	37	925	361	39.02
First Light Dragoons, Company "A"	Second.	Colt's navy revolver	34	850	610	71.76
San Francisco Hussars, Company "B"	Second.	Colt's navy revolver	36	900	487	54.11
Jackson Dragoons, Company "C"	Second.	Colt's navy revolver	37	925	559	60.43
Stockton Guard, (unattached)	Third.	Springfield rifle, b. l., cal. 45.	41	1,025	433	42.24
City Guard, Company "A"	Fourth.	Springfield rifle, b. l., cal. 45.	36	900	296	32.88
Nevada Light Guard, Company "C"	Fourth.	Springfield rifle, b. l., cal. 45*.				
Placerville City Guard, Company "D"	Fourth.	Springfield rifle, b. l., cal. 45.	34	850	255	30.
Yuba Light Infantry, Company "E"	Fourth.	Springfield rifle, b. l., cal. 45.	51	1,275	620	48.62
Sarsfield Guard, Company "G"	Fourth.	Springfield rifle, b. l., cal. 45.	39	975	370	37.94
Chico Guard, (unattached)	Fifth.	Springfield rifle, m. l., cal. 58.	48	1,200	282	23.5

* No report.

TABLE G—Continued.

Consolidated report of target practice, held during the month of May, 1877—Distance, 200 yards for breech-loaders, 150 for muzzle-loaders, and 30 for pistols—Size of target, 6 feet by 4.

NAME OF COMPANY.	Regiment or Battalion	Brigade	Style of Arm	Number of Men Firing.	Number of Points* Possible to be Made	Number of Points Made	Company Percentage
Los Angeles Guard, (unattached)	First Infantry	First	Springfield rifle, m. l., cal. 58	45	1,125	274	24.35
City Guard, Company "B"	Second	Second	Springfield rifle, b. l., cal. 45	34	850	389	45.76
National Guard, Company "C"	First Infantry	Second	Springfield rifle, b. l., cal. 45	44	1,100	703	63.90
Franklin Light Infantry, Company "D"	First Infantry	Second	Springfield rifle, b. l., cal. 45	42	1,050	415	39.52
Summer Light Guard, Company "E"	First Infantry	Second	Springfield rifle, b. l., cal. 45	41	1,025	698	68.09
Light Guard, Company "F"	First Infantry	Second	Springfield rifle, b. l., cal. 45	39	975	447	45.84
Hewston Rifles, Company "H"	First Infantry	Second	Springfield rifle, b. l., cal. 45	36	900	300	33.33
Union Guard, Company "A"	Second Infantry	Second	Springfield rifle, b. l., cal. 45	53	1,325	923	69.66
Thompson Rifles, Company "B"	Second Infantry	Second	Springfield rifle, b. l., cal. 45	41	1,025	212	20.68
San Francisco Fusiliers, Company "C"	Second Infantry	Second	Springfield rifle, b. l., cal. 45	55	1,375	629	45.74
Germania Rifles, Company "D"	Second Infantry	Second	Springfield rifle, b. l., cal. 45	36	900	383	42.55
Steuben Guard, Company "E"	Second Infantry	Second	Springfield rifle, b. l., cal. 45	36	900	350	38.88
San Francisco Cadets, Company "H"	Third Infantry	Second	Springfield rifle, b. l., cal. 45	62	1,550	712	45.93
Montgomery Guard, Company "A"	Third Infantry	Second	Springfield rifle, b. l., cal. 45	43	1,075	631	58.69
Shields Guard, Company "B"	Third Infantry	Second	Springfield rifle, b. l., cal. 45	33	825	475	57.57
Wolfe Tone Guard, Company "C"	Third Infantry	Second	Springfield rifle, b. l., cal. 45	43	1,075	788	73.30
Meagher Guard, Company "D"	Third Infantry	Second	Springfield rifle, b. l., cal. 45	32	800	419	52.37
Eminet Guard, Company "E"	Third Infantry	Second	Springfield rifle, b. l., cal. 45	32	800	488	61.
McMahon Guard, Company "H"	Second	Second	Springfield rifle, b. l., cal. 45	28	700	386	55.14
San José Zouaves, (unattached)	Second	Second	Springfield rifle, b. l., cal. 45	39	975	279	28.61
Hewston Guard, (unattached)	Second	Second	Springfield rifle, b. l., cal. 50	40	1,000	472	47.20

Oakland Guard, (unattached)	Second	Springfield rifle, b. l., cal. 50	39	975	419	42.97
Vallejo Rifles, (unattached)	Second	Springfield rifle, m. l., cal. 58	43	1,075	428	39.81
First Light Dragoons, Company "A"	Second	Colt's navy revolver	39	975	647	66.35
San Francisco Huzzars, Company "B"	Second	Colt's navy revolver	54	1,350	620	45.92
Jackson Dragoons, Company "C"	Second	Colt's navy revolver	38	950	479	50.42
Stockton Guard, (unattached)	Third	Colt's navy revolver	49	1,225	551	44.97
City Guard, Company "A"	Fourth	Springfield rifle, b. l., cal. 45	34	850	301	35.41
Nevada Light Guard, Company "C"	Fourth	Springfield rifle, b. l., cal. 45	52	1,300	670	51.53
Placerville City Guard, Company "D"	Fourth	Springfield rifle, b. l., cal. 45*	50	1,250	549	43.12
Yuba Light Infantry, Company "E"	Fourth	Springfield rifle, b. l., cal. 45	51	1,275	457	35.84
Sarsfield Guard, Company "G"	Fifth	Springfield rifle, b. l., cal. 45	41	1,025	351	34.24
Chicago Guard, (unattached)		Springfield rifle, m. l., cal. 58				
Siskiyou Guard, (unattached)		Springfield rifle, m. l., cal. 58*				

* No report.

ROSTER OF THE NATIONAL GUARD.

TABLE H.

Roster of the National Guard, July 21st, 1877.

NAME.	Grade.	Date of Rank.	Date of Commission.	Residence.	Remarks—Showing Commissions Issued or Reëlections since last Report.
His Excellency, William Irwin, Governor and Commander-in-Chief					
P. F. Walsh, Adjutant-General, ex-officio Chief of Staff, Quartermaster-General, Commissary-General, Inspector-General, and Chief of Ordnance.	Brigadier-General	Dec. 13, 1875	Dec. 13, 1875	Sacramento	
<i>General Staff.</i>					
Chalmers Scott, Chief Engineer	Colonel	May 4, 1876	May 17, 1876	San Luis Rey	Vice Edgar Mills.
William Harney, Paymaster-General	Colonel	May 4, 1876	May 17, 1876	San Francisco	Vice self, reappointed.
B. D. Murphy, Judge Advocate-General	Colonel	May 4, 1876	May 17, 1876	San José	Vice Eugene L. Sullivan.
J. Campbell Shorb, Surgeon-General	Colonel	May 4, 1876	May 17, 1876	San Francisco	Vice G. J. Bucknall.
<i>Aides-de-Camp.</i>					
O. Livermore	Lieutenant-Colonel	May 4, 1876	May 17, 1876	San Francisco	Vice Thomas K. Hook.
James C. Logan	Lieutenant-Colonel	May 4, 1876	May 17, 1876	Oroville	Vice Claus Spreckels.
J. Henley Smith	Lieutenant-Colonel	May 4, 1876	May 17, 1876	San Francisco	Vice W. W. Dodge.
James H. Budd	Lieutenant-Colonel	May 17, 1876	May 17, 1876	Stockton	Vice James H. Whittington.
Charles E. Travers	Lieutenant-Colonel	May 4, 1876	May 17, 1876	San Francisco	Vice B. D. Murphy.
Abraham Newman	Lieutenant-Colonel	May 17, 1876	May 17, 1876	San Francisco	Vice William E. McArthur.
<i>Staff.</i>					
George E. Aiken, Asst. Adjutant-General	Major	Dec. 15, 1875	Dec. 22, 1875	Sacramento	Vice William E. McArthur.
<i>Major-General Commanding N. G.</i>					
George R. Vernon	Major-General	Jan. 20, 1876	Jan. 27, 1876	San Francisco	Vice James Coey.
<i>Staff.</i>					
Samuel D. Mayer, Asst. Adjutant-General	Lieutenant-Colonel	June 25, 1876	June 30, 1876	San Francisco	Vice Sheldon I. Kellogg.
A. W. Von Schmidt, Engineer Officer	Lieutenant-Colonel	Oct. 21, 1876	Nov. 29, 1876	San Francisco	Vice Frank Soule.
C. L. Weller, Ordnance Officer	Lieutenant-Colonel	Jan. 21, 1876	April 19, 1876	San Francisco	Vice A. W. Preston.

IL S. Smith, Quartermaster	Lieutenant-Colonel	Jan. 21, 1876	April 19, 1876	San Francisco	Vice Charles H. Borth.
Mark L. McDonald, Commissary	Lieutenant-Colonel	Jan. 21, 1876	April 19, 1876	San Francisco	Vice Samuel N. Morris.
P. W. Black, Inspector	Lieutenant-Colonel	Jan. 21, 1876	April 19, 1876	San Francisco	Vice W. R. Smedberg.
John J. Tobin, Paymaster	Lieutenant-Colonel	Jan. 21, 1876	April 19, 1876	San Francisco	Vice C. V. D. Hubbard.
C. M. Gilmore, Judge Advocate	Lieutenant-Colonel	July 1, 1876	July 12, 1876	San Francisco	Vice W. C. Barnett.
C. K. Breeze, Surgeon	Lieutenant-Colonel	Jan. 21, 1876	April 19, 1876	San Francisco	Vice J. M. McNulty.
<i>Aides-de-Camp.</i>					
Wm. H. Chamberlain	Major	June 25, 1876	June 30, 1876	San Francisco	Vice Sheldon L. Kellogg.
Frank J. Skelly	Major	Jan. 21, 1876	April 19, 1876	San Francisco	Vice Jno. F. Alexander.
FIRST BRIGADE, N. G.					
E. M. Sanford	Brigadier-General	Feb. 14, 1876	April 4, 1876	Corvallis	Vice Phineas Banning.
<i>Staff.</i>					
H. M. Smith, Assistant Adjutant-General	Major	May 8, 1876	May 13, 1876	Los Angeles	Vice E. M. Ross.
Frank Lecouvreur, Engineer Officer	Major	May 8, 1876	June 8, 1876	Los Angeles	Vice self, reappointed.
N. A. Covarrubias, Ordnance Officer	Major	May 8, 1876	May 13, 1876	Santa Barbara	Vice Mathew Keller.
Myer J. Newmark, Paymaster	Major	May 8, 1876	June 8, 1876	Los Angeles	Vice John C. McCrean.
Frank Ganahl, Quartermaster	Major	May 8, 1876	May 13, 1876	Los Angeles	Vice I. W. Hellman.
Albert J. Johnston, Commissary	Major	May 8, 1876	May 13, 1876	Los Angeles	Vice P. H. Dowling.
John F. Godfrey, Brigade Inspector	Major	May 8, 1876	May 13, 1876	Los Angeles	Vice E. E. Hewitt.
Henry M. Willis, Judge Advocate	Major	May 8, 1876	May 13, 1876	San Bernardino	Vice C. N. Wilson.
H. S. Orme, Surgeon	Major	May 8, 1876	May 13, 1876	Los Angeles	Vice A. Lanbersheimer.
Frank Guiraud, Aid-de-Camp	Captain	May 8, 1876	May 13, 1876	Los Angeles	Vice Constant Meyer.
<i>Los Angeles Guard.</i>					
P. M. Darey	Captain	Jan. 3, 1877	Feb. 3, 1877	Los Angeles	Vice Jas. Bartley.
Thomas Boland	1st Lieutenant	June 25, 1875	April 19, 1876	Los Angeles	Vice D. W. Fitzpatrick.
Daniel Doherty	2d Lieutenant	Jan. 3, 1877	Feb. 3, 1877	Los Angeles	Vice Charles Hagen.
SECOND BRIGADE, N. G.					
John McComb	Brigadier-General	Nov. 23, 1875	Nov. 23, 1875	San Francisco	Vice James Coey.
<i>Staff.</i>					
Samuel W. Backus, Ass't Adjutant-General	Major	Jan. 5, 1875	Jan. 27, 1875	San Francisco	
Frank P. McLennan, Engineer Officer	Major	Jan. 5, 1875	Jan. 27, 1875	San Francisco	

TABLE H—Continued.

NAME.	Grade.	Date of Rank.	Date of Commission.	Residence.	Remarks—Showing Commissions Issued or Reelections since last Report.
FIRST CAVALRY BATTALION.					
<i>Field and Staff.</i>					
David W. Laird, Ordnance Officer	Major	Jan. 5, 1875	Jan. 27, 1875	San Francisco	-----
J. M. Litchfield, Quartermaster	Major	April 4, 1877	April 21, 1877	San Francisco	----- Vice F. G. Smith.
John Mason, Commissary	Major	April 4, 1877	April 21, 1877	San Francisco	----- Vice J. M. Litchfield.
R. H. Savage, Paymaster	Major	April 4, 1877	April 21, 1877	San Francisco	----- Vice John Mason.
Fred. G. Smith, Brigade Inspector	Major	April 4, 1877	April 21, 1877	San Francisco	----- Vice Wm. R. Snedberg.
C. Mason Kinne, Judge Advocate	Major	Jan. 19, 1876	April 14, 1876	San Francisco	----- Vice R. H. Lloyd.
A. A. O'Neil, Surgeon	Major	Jan. 19, 1876	April 14, 1876	San Francisco	----- Vice P. H. Humphrey.
Charles Sonntag, Aid-de-Camp	Captain	April 4, 1877	April 21, 1877	San Francisco	----- Vice John Curran.
FIRST LIGHT DRAGOONS, COMPANY "A."					
P. R. O'Brien	Major	July 24, 1868	Aug. 25, 1868	San Francisco	-----
John P. Rafferty	1st Lieut. and Adjutant	June 16, 1876	June 26, 1876	San Francisco	----- Vice A. Newman.
William Corcoran	1st Lieut. and Quartermaster	March 3, 1869	March 4, 1869	San Francisco	-----
A. Stewart	1st Lieut. and Surgeon	June 17, 1876	June 26, 1876	San Francisco	----- Vice C. K. Brezéz.
James W. Collins	1st Lieut. and Commissary	Feb. 20, 1875	Oct. 11, 1875	San Francisco	----- Vice D. W. Laird.
	1st Lieut. and Paymaster				----- Vacant.
FIRST LIGHT DRAGOONS, COMPANY "B."					
Henry W. Gray	Captain	June 11, 1877	June 20, 1877	San Francisco	----- Vice J. R. Middlesworth.
Marcus M. Cook	1st Lieutenant	June 11, 1877	June 20, 1877	San Francisco	----- Vice H. W. Gray.
John Hey	Senior 2d Lieutenant	June 11, 1877	June 20, 1877	San Francisco	----- Vice M. M. Cook.
John Perrin	Junior 2d Lieutenant	Jan. 8, 1877	Feb. 3, 1877	San Francisco	----- Vice M. M. Cook.
SAN FRANCISCO HUSSARS, COMPANY "B."					
C. C. Keene	Captain	Nov. 29, 1876	Dec. 18, 1876	San Francisco	----- Vice J. Schreiber.
Richard Harrold	1st Lieutenant	Nov. 29, 1876	Dec. 18, 1876	San Francisco	----- Vice C. C. Keene.
Otto Charles L. Reinecke	Senior 2d Lieutenant	Nov. 29, 1876	Dec. 18, 1876	San Francisco	----- Vice R. Harrold.
Nathan Rogers	Junior 2d Lieutenant	July 28, 1875	Sept. 6, 1875	San Francisco	----- Vice A. K. Hollis.

Michael Greany
Edward McPhillips
Jeremiah Kennedy
Patrick F. McGrath

First California Guard, Light Artillery.

R. G. Bush
George W. Chapin
Hugh R. Hart
John B. Weller, Jr.
J. H. Jones

FIRST INFANTRY REGIMENT.

Field and Staff.

George W. Grannis
Oscar Woodhams
David Wilder
James L. Fields
William J. Younger
James D. Whitney
James Kip
Sidney M. Smith
John Hemphill

City Guard, Company "B."

John H. Dickenson
Edwin F. Selleck
Louis R. Townsend

National Guard, Company "C."

John Stuart
Hermann S. Templeton
Adolph F. Klose

Franklin Light Infantry, Company "D."

Richard H. Orton

Captain
1st Lieutenant
Senior 2d Lieutenant
Junior 2d Lieutenant

Jan. 12, 1871
Jan. 10, 1873
Jan. 7, 1875
Jan. 10, 1873

Captain
Senior 1st Lieutenant
Junior 1st Lieutenant
Senior 2d Lieutenant
Junior 2d Lieutenant

Jan. 6, 1873
Jan. 6, 1873
April 17, 1877
April 17, 1877
April 17, 1877

Colonel
Lieutenant-Colonel
Major
1st Lieut. and Adjutant
1st Lieut. and Quartermaster
1st Lieut. and Ass't. Surgeon
1st Lieut. and Paymaster
1st Lieut. and Commissary
Chaplain

Feb. 27, 1875
Feb. 27, 1875
Feb. 27, 1875
March 27, 1875
May 26, 1877
March 27, 1875
Dec. 13, 1876
March 27, 1875
March 27, 1875

Captain
1st Lieutenant
2d Lieutenant

April 5, 1877
April 5, 1877
April 5, 1877

Captain
1st Lieutenant
2d Lieutenant

Jan. 8, 1877
Jan. 8, 1877
Jan. 8, 1877

Captain

Jan. 6, 1875

San Francisco
San Francisco
San Francisco
San Francisco

Re-elected July 5, 1877.

San Francisco
San Francisco
San Francisco
San Francisco
San Francisco

Re-elected May 31, 1877.
Re-elected April 17, 1877.
Vice G. L. Keynolds.
Vice F. F. De Rose.
Vice J. H. McLean.

San Francisco
San Francisco
San Francisco
San Francisco
San Francisco
San Francisco
San Francisco
San Francisco

Vice Henry A. Plate.
Vice T. J. O'Keefe.
Vice E. F. Selleck.

San Francisco
San Francisco
San Francisco

Vice George Humphrey.
Vice George Vaughn.
Vice A. W. Hanna.

San Francisco

Re-elected Feb. 16, 1877.

TABLE H—Continued.

NAME.	Grade.	Date of Rank.	Date of Commission.	Residence.	Remarks—Showing Commissions Issued or Reëlections since last Report.
Edward C. Hughes.	1st Lieutenant	May 12, 1876	June 8, 1876	San Francisco	Vice Jas. C. Parkinson.
Vincent Kingwell.	2d Lieutenant	May 12, 1876	June 8, 1876	San Francisco	Vice S. F. Sutherland.
<i>Sumner Light Guard, Company "E."</i>					
Henry J. Burns.	Captain	Oct. 23, 1871	Nov. 1, 1871	San Francisco	Reëlected Nov. 1, 1875.
Edwin O. Hunt.	1st Lieutenant	Dec. 19, 1871	Jan. 26, 1872	San Francisco	Reëlected Jan. 4, 1876.
Joshua Robertson.	2d Lieutenant	Jan. 8, 1877	Jan. 17, 1877	San Francisco	Vice W. H. Strout.
<i>Light Guard, Company "F."</i>					
James E. Hughes.	Captain	Aug. 15, 1871	Aug. 30, 1871	San Francisco	Reëlected Sept. 21, 1875.
Joseph J. Butler.	1st Lieutenant	Sept. 21, 1875	Oct. 11, 1875	San Francisco	Vice Wm. E. Deering.
Thomas J. Purdon.	2d Lieutenant	Sept. 21, 1875	Oct. 11, 1875	San Francisco	Vice J. J. Butler.
<i>Hewston Rifles, Company "H."</i>					
Hymen P. Bush.	Captain	April 12, 1872	April 22, 1872	San Francisco	Reëlected May 11, 1876.
Charles Jansen.	1st Lieutenant	Dec. 9, 1875	Dec. 22, 1875	San Francisco	Vice Frank Sperling.
W. M. Willey.	2d Lieutenant	Dec. 9, 1875	Dec. 22, 1875	San Francisco	Vice Charles Jansen.
SECOND INFANTRY REGIMENT.					
<i>Field and Staff.</i>					
William R. Smedberg.	Colonel	Oct. 13, 1876	Oct. 16, 1876	San Francisco	Vice Richard H. Savage.
Henry H. Thrall.	Lieutenant-Colonel	Feb. 15, 1876	April 14, 1876	San Francisco	Vice Harvey Lake.
James A. Laven.	Major	Feb. 15, 1876	April 14, 1876	San Francisco	Vice H. H. Thrall.
S. P. Ford.	1st Lieutenant and Adjutant	Jan. 24, 1876	Feb. 11, 1876	San Francisco	Vice F. W. Pierce.
H. W. Bruhns.	1st Lieut. and Quartermaster	Feb. 3, 1877	Feb. 14, 1877	San Francisco	Vice Henry Meyer.
Edwin J. Fraser.	1st Lieut. and Ass't Surgeon	July 30, 1874	June 24, 1875	San Francisco	
Thomas S. Taylor.	1st Lieut. and Paymaster	Feb. 3, 1877	Feb. 14, 1877	San Francisco	Vice John Curran.
	1st Lieut. and Commissary				Vacant.

TABLE H—Continued.

NAME.	Grade.	Date of Rank.	Date of Commission.	Residence.	Remarks—Showing Commissions Issued or Reelections since last Report.
John Grant.....	1st Lieut. and Quartermaster	March 9, 1876	April 19, 1876	San Francisco	Vice P. W. Black.
Thomas Green.....	1st Lieut. and Asst Surgeon	May 1, 1871	May 1, 1871	San Francisco	
John T. McGeoghegan.....	1st Lieut. and Paymaster	Dec. 28, 1874	Jan. 16, 1875	San Francisco	
James G. McGuire.....	1st Lieut. and Commissary	Nov. 1, 1875	Nov. 10, 1875	San Francisco	Vice Florence Crowley.
Thomas Larkin.....	Chaplain	May 1, 1871	Jan. 19, 1874	San Francisco	
<i>Montgomery Guard, Company "A."</i>					
Charles Quinn.....	Captain	Feb. 22, 1868	March 6, 1872	San Francisco	Re-elected Feb. 15, 1876.
John McCully.....	1st Lieutenant	Feb. 3, 1874	Feb. 12, 1874	San Francisco	Re-elected Feb. 15, 1876.
James Prior.....	2d Lieutenant	May 12, 1874	May 15, 1874	San Francisco	Re-elected May 9, 1876.
<i>Shields Guard, Company "B."</i>					
Michael J. Wrin.....	Captain	Dec. 10, 1874	Dec. 19, 1874	San Francisco	Re-elected Dec. 14, 1876.
Joseph Monaghan.....	1st Lieutenant	June 2, 1874	June 13, 1874	San Francisco	Re-elected Dec. 14, 1876.
Patrick McAleer.....	2d Lieutenant	August 7, 1872	Oct. 2, 1872	San Francisco	Re-elected Dec. 14, 1876.
<i>Wolfe Tone Guard, Company "C."</i>					
Timothy Fitzpatrick.....	Captain	Sept. 21, 1875	Oct. 11, 1875	San Francisco	Vice Eugene W. Cary.
P. H. Desmond.....	1st Lieutenant	Dec. 19, 1876	Jan. 17, 1877	San Francisco	Vice Michael O'Brien.
Patrick Murphy.....	2d Lieutenant	Dec. 19, 1876	Jan. 17, 1877	San Francisco	Vice P. H. Desmond.
<i>Meagher Guard, Company "D."</i>					
Daniel J. Sullivan.....	Captain	May 3, 1876	May 13, 1876	San Francisco	Vice John Egan.
Timothy Sullivan.....	1st Lieutenant	May 3, 1876	May 13, 1876	San Francisco	Vice D. J. Sullivan.
Edward Supple.....	2d Lieutenant	May 3, 1876	May 13, 1876	San Francisco	Vice Timothy Sullivan.
<i>Ennet Guard, Company "E."</i>					
Robert Cleary.....	Captain	May 15, 1868	May 20, 1870	San Francisco	Re-elected May 18, 1876.
Matthew Conlon.....	1st Lieutenant	April 26, 1877	May 15, 1877	San Francisco	Vice Francis P. O'Keefe.

Richard Stokes	2d Lieutenant	April 26, 1877	May 15, 1877	San Francisco	Vice William Mannix.
<i>McMahon Guard, Company "H."</i>					
John H. McMenomy	Captain	March 11, 1873	March 31, 1873	San Francisco	Re-elected, March 12, 1877.
John H. Gilmore	1st Lieutenant	March 12, 1877	March 28, 1877	San Francisco	Vice E. F. Gleason.
Thomas McNamara	2d Lieutenant	March 12, 1877	March 28, 1877	San Francisco	Vice J. H. Gilmore.
UNATTACHED COMPANIES, SECOND BRIGADE, N. G.					
<i>San José Zouaves.</i>					
James Mulvenna	Captain	May 10, 1877	May 26, 1877	San José	Vice Germain F. Pillot.
John Hartzoke	1st Lieutenant	May 10, 1877	May 26, 1877	San José	Vice James Mulvenna.
Alex. Miller, Jr.	2d Lieutenant	May 10, 1877	May 26, 1877	San José	Vice John Hartzoke.
<i>Vallejo Rifles.</i>					
Frank O'Grady	Captain	May 5, 1874	May 9, 1874	Vallejo	Re-elected May 10, 1876.
Thomas P. McDonald	1st Lieutenant	April 11, 1877	May 15, 1877	Vallejo	Vice Thomas Rodgers.
William McDermott	2d Lieutenant	April 11, 1877	May 15, 1877	Vallejo	Vice Thomas McDonald.
<i>Oakland Guard.</i>					
Horace D. Ranlett	Captain	May 1, 1873	May 6, 1873	Oakland	Re-elected Dec. 16, 1875.
Henry Maloon	1st Lieutenant	Nov. 13, 1873	Nov. 24, 1873	Oakland	Re-elected Dec. 16, 1875.
J. B. O. Sarpy	2d Lieutenant	Dec. 16, 1875	Dec. 22, 1875	Oakland	Vice D. B. Bankhead.
<i>Heuston Guard.</i>					
James Armstrong	Captain	June 29, 1869	July 6, 1871	Petaluma	Re-elected June 29, 1877.
Frank Warren	1st Lieutenant	June 29, 1877	July 11, 1877	Petaluma	Vice Wm. H. Rugg.
William Ordway	2d Lieutenant	June 29, 1877	July 11, 1877	Petaluma	Vice Frank Warren.
THIRD BRIGADE, N. G.					
Edward Canavan	Brigadier-General	April 3, 1876	April 4, 1876	Stockton	Vice Thomas E. Ketchum.
<i>Staff.</i>					
_____, Assistant Adjutant-General	Major	May 29, 1875	June 2, 1875	Farmington	Vacant.
David F. Hadley, Engineer Officer	Major	May 29, 1875	June 2, 1875	Farmington	Vacant.

TABLE H—Continued.

NAME.	Grade.	Date of Rank.	Date of Commission.	Residence.	Remarks—Showing Commissions Issued or Relections since last Report.
J. P. Kafitz, Ordnance Officer.	Major	March 10, 1877	March 22, 1877	Stockton	Vice Wm. M. Gibson.
Emanuel Block, Quartermaster.	Major	April 3, 1877	April 19, 1877	Stockton	Vice F. J. Aldrich.
Joseph Dyas, Commissary.	Major	June 27, 1876	June 30, 1876	Stockton	Vice R. S. Johnson.
James M. Garwood, Paymaster.	Major	June 27, 1876	June 30, 1876	Collegedale	Vice J. M. Burt.
R. P. Nason, Brigade Inspector.	Major	May 29, 1875	June 2, 1875	Stockton	
James A. Shepherd, Judge Advocate.	Major	June 27, 1876	June 30, 1876	Lathrop	Vice James H. Budd.
Surgeon	Major				Vacant.
John C. O'Brien, Aid-de-Camp.	Captain	June 27, 1876	June 30, 1876	Bantas	Vice Frank E. Ketchum.
<i>Stockton Guard.</i>					
Eugene Leche.	Captain	Oct. 16, 1876	Oct. 24, 1876	Stockton	Vice L. E. Lyon.
John J. Nunan.	1st Lieutenant	April 20, 1876	May 4, 1876	Stockton	Vice E. DeLano.
John W. Payne.	2d Lieutenant	April 20, 1876	May 4, 1876	Stockton	Vice J. J. Nunan.
FOURTH BRIGADE, N. G.					
M. S. Horan	Brigadier-General	March 3, 1877	March 5, 1877	Sacramento	Vice W. T. Crowell.
<i>Staff.</i>					
W. A. Anderson, Ass't Adjutant-General.	Major	Nov. 30, 1875	Dec. 1, 1875	Sacramento	Vice H. H. Linnell.
D. E. Alexander, Engineer Officer.	Major	March 7, 1877	March 22, 1877	Sacramento	Vice G. T. Witham.
William Bartels, Ordnance Officer.	Major	March 7, 1877	March 22, 1877	Sacramento	Vice R. M. Hamilton.
John Egan, Quartermaster.	Major	March 7, 1877	March 22, 1877	Sacramento	Vice L. B. Ayer.
A. J. Wetziar, Commissary.	Major	Jan. 30, 1877	Feb. 3, 1877	Sacramento	Vice A. C. Valliant.
William A. Beck, Paymaster.	Major	June 27, 1877	June 28, 1877	Sacramento	Vice Marion Biggs, Jr.
J. R. Foster, Brigade Inspector.	Major	March 7, 1877	March 22, 1877	Sacramento	Vice M. S. Horan.
Matt. F. Johnson, Judge Advocate.	Major	March 7, 1877	March 22, 1877	Sacramento	Vice T. B. McFarland.
G. G. Tyrrell, Surgeon.	Major	Nov. 30, 1875	Dec. 1, 1875	Sacramento	Vice G. L. Simmons.
W. I. Wallace, Aid-de-Camp.	Captain	Jan. 30, 1877	Feb. 3, 1877	Sacramento	Vice J. G. Martine.

FIRST BATTALION OF INFANTRY.

Field and Staff.

Thomas J. Clinie	Major	April 13, 1877	April 19, 1877	Sacramento
C. L. White	1st Lieutenant and Adjutant	April 20, 1877	April 30, 1877	Sacramento
John McFarish	1st Lieut. and Quartermaster	April 20, 1877	April 30, 1877	Sacramento
Thomas B. Reid	1st Lieut. and Paymaster	May 24, 1877	May 26, 1877	Sacramento
R. H. Pettit	1st Lieut. and Commissary	April 20, 1877	April 30, 1877	Sacramento
C. H. Fisher	1st Lieut. and Ass't Surgeon	April 20, 1877	April 30, 1877	Sacramento

City Guard, Company "A."

J. W. Guthrie	Captain	August 20, 1872	Sept. 7, 1872	Sacramento
E. H. McKee	1st Lieutenant	July 1, 1875	April 19, 1876	Sacramento
Fred. J. Kearney	2d Lieutenant	Sept. 7, 1876	October 6, 1876	Sacramento

Nevada Light Guard, Company "C."

John A. Rapp	Captain	Nov. 11, 1873	Jan. 10, 1874	Nevada City
William J. Organ	1st Lieutenant	Dec. 6, 1875	Dec. 8, 1875	Nevada City
James S. Murchie	2d Lieutenant	Dec. 6, 1875	Dec. 8, 1875	Nevada City

Placerville City Guard, Company "D."

George F. McDonald	Captain	Jan. 29, 1877	Feb. 20, 1877	Placerville
Perrie Vignaut	1st Lieutenant	Jan. 29, 1877	Feb. 20, 1877	Placerville
Alva W. Marver	2d Lieutenant	Jan. 29, 1877	Feb. 20, 1877	Placerville

Yuba Light Infantry, Company "E."

Josiah P. Brown	Captain	Nov. 7, 1863	Jan. 20, 1871	Camptonville
John G. McLellan	1st Lieutenant	Jan. 9, 1875	Jan. 16, 1875	Camptonville
Joseph H. Fuller	2d Lieutenant	Jan. 9, 1875	Jan. 16, 1875	Camptonville

Sarsfield Guard, Company "G."

Clement A. Laufkotter	Captain	Feb. 17, 1876	April 14, 1876	Sacramento
B. M. Van Alstein	1st Lieutenant	Feb. 17, 1876	April 19, 1876	Sacramento
J. P. Dalton	2d Lieutenant	March 24, 1875	April 3, 1875	Sacramento

TABLE H—Continued.

NAME.	Grade.	Date of Rank.	Date of Commission.	Residence.	Remarks—Showing Commissions Issued or Reëlections since last Report.
<i>Sacramento Light Artillery.</i>					
J. M. Robbins.	Captain	Feb. 11, 1876	April 19, 1876	Sacramento	Vice John B. Sherburn.
A. C. York	Senior 1st Lieutenant	Feb. 11, 1876	April 19, 1876	Sacramento	Vice J. M. Robbins.
J. F. McMoran	Junior 1st Lieutenant	Sept. 29, 1876	Nov. 20, 1876	Sacramento	Vice Samuel McDonald.
E. Kueneman	Senior 2d Lieutenant	Sept. 29, 1876	Nov. 20, 1876	Sacramento	Vice Charles Fonteneau.
C. W. Metcalf.	Junior 2d Lieutenant	Sept. 29, 1876	Nov. 20, 1876	Sacramento	Vice Edward Sovereign.
FIFTH BRIGADE, N. G.					
Charles Cadwalader	Brigadier-General	April 1, 1873	April 6, 1877	Red Bluff	Reappointed, April 6, 1877.
<i>Staff.</i>					
Lamson S. Wellon, Asst Adjutant-General	Major	Oct. 4, 1875	Nov. 3, 1875	Red Bluff	Vice R. H. Campbell.
Charles Faulkner, Engineer Officer	Major	April 21, 1876	May 4, 1876	Chico	Vice William N. DelHaven.
Joseph S. Cone, Ordnance Officer	Major	Oct. 10, 1876	Oct. 24, 1876	Red Bluff	Vice John Brady.
John A. Turner, Paymaster	Major	June 30, 1873	July 9, 1873	Chico	Vice George A. Witemyer.
A. M. Bailey, Quartermaster	Major	April 21, 1876	May 4, 1876	Chico	Vice R. S. Bettis.
Joseph R. Houghton, Commissary	Major	June 9, 1876	June 26, 1876	Nord	Vice John N. Montgomery.
Gorham G. Kimball, Brigade Inspector	Major	March 2, 1876	May 6, 1876	Red Bluff	Vice George C. Perkins.
Edwin J. Lewis, Judge Advocate	Major	March 9, 1868	March 10, 1868	Red Bluff	Vice S. M. Sproul.
James S. Cameron, Surgeon	Major	March 2, 1876	April 14, 1876	Red Bluff	
Thomas R. Ryan, Aid-de-Camp	Captain	July 8, 1874	July 13, 1874	Red Bluff	
<i>Chico Guard.</i>					
William T. Turner	Captain	April 30, 1875	May 28, 1875	Chico	Reëlected April 24, 1877.
Hiram T. Batchelder	1st Lieutenant	April 30, 1875	May 28, 1875	Chico	Reëlected April 24, 1877.
John M. Pearson	2d Lieutenant	August 21, 1876	August 31, 1876	Chico	Vice Samuel T. Black.
<i>Siskiyou Guard.</i>					
	Captain				Vacant.

Henry L. Tickner	1st Lieutenant	Oct. 16, 1876	Nov. 20, 1876	Yreka	Vice Charles Clodi.
Elisha Dewitt	2d Lieutenant	June 24, 1876	July 12, 1876	Yreka	Vice Chas. C. Cornish.
SIXTH BATTALION, N. G.					
J. G. Wall	Brigadier-General	Feb. 18, 1876	April 4, 1876	Crescent City	Vice John C. Schmidt.
7— (2)	Staff.				
Jacob Marhoffer, Ass't Adjutant-General	Major	April 19, 1876	May 4, 1876	Crescent City	Vice W. P. Hanna.
L. F. Cooper, Engineer Officer	Major	April 19, 1876	May 4, 1876	Crescent City	Vice W. H. Woodbury.
Pierce H. Ryan, Ordnance Officer	Major	April 19, 1876	May 4, 1876	Eureka	Vice K. Geer.
George W. Tack, Paymaster	Major	April 19, 1876	May 4, 1876	Crescent City	Vice David E. Gordon.
J. E. Murphy, Quartermaster	Major	April 19, 1876	May 4, 1876	Crescent City	Vice John A. Watson.
M. B. Adams, Commissary	Major	April 19, 1876	May 4, 1876	Arcata	Vice Joseph Greenebaum.
George B. Temple, Brigade Inspector	Major	April 19, 1876	May 4, 1876	Happy Camp	Vice M. Spencer.
Edgar Mason, Judge Advocate	Major	April 19, 1876	May 4, 1876	Crescent City	Vice Josiah Bell.
John W. Reins, Surgeon	Major	April 26, 1877	May 15, 1877	Crescent City	Vice O. B. Adams.
George E. Tryon, Aid-de-Camp	Captain	April 19, 1876	May 4, 1876	Smith River	Vice W. J. McKenna.

LIST OF EXEMPT CERTIFICATES.

TABLE I.

A list of exempt certificates issued to members of National Guard from August 1st, 1875, to August 1st, 1877.

NAME.	Rank.	Company.	Company Letter	Regiment or Battalion	Brigade	Date of Certificate.
Beckler, Conrad	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Byrne, Michael	Private	Jackson Dragoons, cavalry	"C"	1st	2d	December 9, 1875.
Bamber, Charles A.	Private	Placerville City Guard	"D"	4th	4th	June 19, 1876.
Byrne, James	Private	Hewston Rifles	"H"	1st	2d	July 19, 1876.
Bixby, Levi S.	1st Sergeant	Oakland Guard, (unattached)			2d	September 7, 1876.
Bateman, Michael C.	Lieutenant-Colonel			3d	2d	September 14, 1876.
Becker, Casper	Private	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
Bush, Hyman P.	Captain	Hewston Rifles	"H"	1st	2d	June 18, 1877.
Coogan, John	Private	Montgomery Guard	"A"	3d	2d	April 15, 1876.
Chase, Henry B.	Quartermaster Sergeant	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
Cook, Isaac	Private	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
Crittenden, Charles S.	1st Corporal	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
Campbell, Joseph F.	Private	Hewston Rifles	"H"	1st	2d	June 11, 1877.
Campbell, Ed. M.	Corporal	Oakland Guard, (unattached)			2d	June 15, 1877.
Dunker, Adolph	Private	Union Guard	"A"	2d	2d	November 18, 1875.
Dohrman, A.	Private	Germania Rifles	"D"	2d	2d	January 8, 1877.
Edwards, William E.	Private	Franklin Light Infantry	"D"	1st	2d	March 28, 1877.
Fowkes, Henry	Private	Emmet Guard	"E"	3d	2d	May 4, 1876.
Fitzpatrick, Arthur G.	1st Lieutenant and Paymaster	First Cavalry Battalion			2d	January 9, 1877.
Goeljen, Adolph	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Healy, E. W.	Corporal	Wolfe Tone Guard	"C"	3d	2d	September 7, 1875.
Hogan, William	Corporal	Wolfe Tone Guard	"C"	3d	2d	October 11, 1875.
Hadler, John	Corporal	Germania Rifles	"D"	2d	2d	November 1, 1875.
Hollman, Charles	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Heinzenberger, C. A.	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Heins, Herman	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Howley, Patrick	Private	Vallejo Rifles, (unattached)			2d	December 9, 1875.
Hughes, E. C.	1st Lieutenant	Franklin Light Infantry	"D"	1st	2d	March 28, 1877.
Janke, William A.	Orderly Sergeant	Germania Rifles	"D"	2d	2d	November 1, 1875.

Jagoe, Robert H.	Private	Emmet Guard	"E"	3d	2d	June 3, 1876.
Kronke, Edward	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Kolkman, H.	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Kennelly, Jeremiah	Senior 2d Lieutenant	Jackson Dragons, cavalry	"C"	1st	2d	June 26, 1876.
Laird, D. W.	Major and Ordnance Officer				2d	November 1, 1875.
Lehr, Daniel	Private	Placerville City Guard	"D"	4th	4th	June 19, 1876.
Myles, William	Private	Oakland Guard, (unattached)			2d	September 7, 1875.
McGonigle, John	Private	Wolfe Tone Guard	"C"	3d	2d	October 11, 1875.
Melzer, George	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
McBarnott, Robert	Sergeant	Vallejo Rifles, (unattached)			2d	December 9, 1875.
Mouthrop, C. F.	Corporal	Summer Light Guard	"E"	1st	2d	August 17, 1876.
Mellus, Joseph	Sergeant	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
Morrison, John C. Jr.	Private	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
McNally, Lawrence	Private	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
McDonald, George	Sergeant	San Francisco Hussars, cavalry	"B"	1st	2d	January 8, 1877.
Miller, W. W.	Private	Sacramento Light Artillery, (unattached)			4th	February 1, 1877.
McDonald, Samuel	Private	Franklin Light Infantry	"D"	1st	2d	March 28, 1877.
McFarlane, A. R.	1st Lieutenant	San José Zouaves, (unattached)			2d	May 14, 1877.
Mulvenna, James	Sergeant	Vallejo Rifles, (unattached)			2d	May 14, 1877.
Madre, D.	Private	Germania Rifles	"D"	2d	2d	April 7, 1877.
Ordieb, Charles	Private	San Francisco Hussars, cavalry	"B"	1st	2d	November 1, 1875.
Peters, Charles F.	Private	Germania Rifles	"D"	2d	2d	January 8, 1877.
Preston, D. C.	Private	Germania Rifles	"D"	2d	2d	September 17, 1875.
Reich, John	Captain	Sacramento Light Artillery, (unattached)			4th	June 7, 1876.
Robbins, J. M.	Private	Summer Light Guard	"E"	1st	2d	August 17, 1876.
King, R. S.	1st Lieutenant and Commissary	First Infantry Regiment			2d	September 7, 1875.
Smith, Sidney M.	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Sturke, William J.	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Smith, Henry	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Schultz, Louis	Corporal	Germania Rifles	"D"	2d	2d	November 1, 1875.
Smith, John	Corporal	Germania Rifles	"D"	2d	2d	November 1, 1875.
Smith, Henry R.	Sergeant	Germania Rifles	"D"	2d	2d	November 1, 1875.
Stell, Henry	Captain	Germania Rifles	"D"	2d	2d	November 1, 1875.
Snyder, John	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Stombs, R. T.	Private	Vallejo Rifles, (unattached)			2d	November 1, 1875.
Sheehan, Timothy	Private	Emmet Guard	"E"	3d	2d	December 9, 1875.
Sullivan, Cornelius	Private	Germania Rifles	"D"	2d	2d	December 12, 1876.
Smith, Adam	Private	Vallejo Rifles, (unattached)			2d	December 30, 1876.
Schaefer, Charles	Private	Germania Rifles	"D"	2d	2d	June 18, 1877.
Tauler, A.	Private	Sacramento Light Artillery, (unattached)			4th	November 1, 1875.
Trier, Theodore	Private	Germania Rifles	"D"	2d	2d	July 26, 1876.
Umbach, C. L.	Private	Germania Rifles	"D"	2d	2d	November 1, 1875.
Von Seuden, G. D.	Sergeant	Germania Rifles	"D"	2d	2d	November 1, 1875.

TABLE I.—Continued.

NAME.	Rank.	Company.	Company Letter -----	Regiment or Battalion --	Brigade-----	Date of Certificate.
Veitch, Perry	Private	Wolfe Tone Guard	" C "	3d	2d	September 23, 1875.
Wulbern, John	Corporal	Germania Rifles	" D "	2d	2d	November 1, 1875.
Waleott, Asa	Private	Hewston Rifles	" H "	1st	2d	August 17, 1876.
Warner, John E.	Private	Oakland Guard, (unattached)	" "		2d	March 5, 1877.
Zeller, George	Private	Union Guard	" A "	2d	2d	November 18, 1875.

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RESIGNATIONS AND CASUALTIES.

TABLE J.

Resignations and Casualties from August 1st, 1875, to August 1st, 1877.

NAME.	Rank, Etc.	Date of Resignation.	Date of Acceptance.	Remarks.
Aldrich, Frank J.	Major and Quartermaster, on staff of Brigadier-General commanding Third Brigade, N. G.	Mar. 27, 1877	Mar. 31, 1877	Per S. O. No. 6, C. S. 1877.
Adams, O. B.	Major and Surgeon, on staff of Brigadier-General commanding Sixth Brigade, N. G.	Jan. 18, 1877	April 19, 1877	Per S. O. No. 9, C. S. 1877.
Barry, Thomas F.	Major and Aid-de-Camp, staff of Major-General commanding N. G.	Aug. 17, 1875	Sept. 1, 1875	Per S. O. No. 18, C. S. 1875.
Black, Samuel T.	Second Lieutenant, Chico Guard (unattached), Fifth Brigade, N. G.	Aug. 1, 1876	Aug. 5, 1876	Per S. O. No. 17, C. S. 1876.
Bartley, James	Captain, Los Angeles Guard (unattached), First Brigade, N. G.	Oct. 16, 1876	Dec. 12, 1876	Per S. O. No. 34, C. S. 1876.
Biggs, Marion Jr.	Major and Paymaster, on staff of Brigadier-General commanding Fourth Brigade, N. G.	June 27, 1877	June 27, 1877	Per S. O. No. 14, C. S. 1877.
Brown, John V.	Captain, Siskiyou Guard (unattached), Fifth Brigade, N. G.	July 7, 1877	July 31, 1877	Per S. O. No. 17, C. S. 1877.
Campbell, R. H.	Major and Assistant Adjutant-General, on staff of Brigadier-General commanding Fifth Brigade, N. G.	Oct. 1, 1875	Nov. 2, 1875	Per S. O. No. 20, C. S. 1875.
Crowley, Florence	First Lieutenant and Commissary, staff of Colonel commanding Third Infantry Regiment, Second Brigade, N. G.	Oct. 21, 1875	Nov. 8, 1875	Per S. O. No. 21, C. S. 1875.
Campbell, Wm. L.	Brigadier-General, commanding Fourth Brigade, N. G.	Nov. 19, 1875	Nov. 27, 1875	Per G. O. No. 8, C. S. 1875.
Cornish, Charles C.	Second Lieutenant, Siskiyou Guard (unattached), Fifth Brigade, N. G.	May 23, 1876	June 6, 1876	Per S. O. No. 9, C. S. 1876.
Clarkson, Prentice M.	First Lieutenant, Union Guard, Company "A," Second Infantry Regiment, Second Brigade, N. G.	Aug. 15, 1876	Aug. 23, 1876	Per S. O. No. 21, C. S. 1876.
Cantus, George	Captain San Francisco Fusiliers, Company "C," Second Infantry Regiment, Second Brigade, N. G.	Nov. 29, 1876	Dec. 12, 1876	Per S. O. No. 33, C. S. 1876.
Crowell, W. T.	Brigadier-General, commanding Fourth Brigade, N. G.	Feb. 27, 1877	Mar. 5, 1877	Per G. O. No. 1, C. S. 1877.
Dolan, Robert	Captain, Sarsfield Guard, Company "G," Fourth Infantry Regiment, Fourth Brigade, N. G.	Jan. 15, 1876	Jan. 18, 1876	Per S. O. No. 4, C. S. 1876.
De Lano, E.	First Lieutenant, Stockton Guard (unattached), Third Brigade, N. G.	April 3, 1876	April 14, 1876	Per S. O. No. 6, C. S. 1876.
Egan, John	First Lieutenant, Sarsfield Guard, Company "G," Fourth Infantry Regiment, Fourth Brigade, N. G.	Jan. 13, 1876	Jan. 18, 1876	Per S. O. No. 4, C. S. 1876.
Godley, Montgomery	First Lieutenant and Paymaster, staff of Colonel commanding First Infantry Regiment, Second Brigade, N. G.	Sept. 18, 1876	Oct. 24, 1876	Per S. O. No. 31, C. S. 1876.

Gibson, William M.	Major and Ordnance Officer, on staff of the Brigadier-General commanding Third Brigade, N. G.	Mar. 3, 1877	Mar. 5, 1877	Per S. O. No. 3, C. S. 1877.
Irelan, William	Second Lieutenant, Thompson Rifles, Company "B," Second Infantry Regiment, Second Brigade, N. G.	Oct. 23, 1875	Nov. 22, 1875	Per S. O. No. 24, C. S. 1875.
Johnson, R. S.	Major and Commissary, on staff of the Brigadier-General commanding Third Brigade, N. G.	May 15, 1876	June 5, 1876	Per S. O. No. 8, C. S. 1876.
Jansen, Charles	First Lieutenant, Hewson Rifles, Company "H," First Infantry Regiment, Second Brigade, N. G.	June 10, 1876	June 24, 1876	Per S. O. No. 12, C. S. 1876.
Kellogg, Sheldon I.	Lieutenant-Colonel and Assistant Adjutant-General, on staff of the Major General commanding N. G.	May 10, 1876	June 24, 1876	Per S. O. No. 10, C. S. 1876.
Ketchum, Frank E.	Captain and Aid-de-Camp, on staff of the Brigadier-General commanding Third Brigade, N. G.	June 7, 1876	June 24, 1876	Per S. O. No. 11, C. S. 1876.
Lake, Harvey	Lieutenant-Colonel, Second Infantry Regiment, Second Brigade, N. G.	Jan. 6, 1876	Jan. 15, 1876	Per S. O. No. 3, C. S. 1876.
Lehe, Eugene	Major and Assistant Adjutant-General, on staff of the Brigadier-General commanding Third Brigade, N. G.	Oct. 10, 1876	Oct. 16, 1876	Per S. O. No. 30, C. S. 1876.
Levy, Henry	First Lieutenant, Thompson Rifles, Company "B," Second Infantry Regiment, Second Brigade, N. G.	May 21, 1877	June 9, 1877	Per S. O. No. 13, C. S. 1877.
Morse, Henry N.	Lieutenant-Colonel and Quartermaster, on staff of the Major-General commanding, N. G.	June 29, 1875	Sept. 6, 1875	Per S. O. No. 16, C. S. 1875.
Martine, J. G.	Brigadier-General, Fourth Brigade, N. G.	April 8, 1876	April 14, 1876	Per G. O. No. 5, C. S. 1876.
Middlesworth, J. R.	Captain, First Light Dragoons, Company "A," First Cavalry Battalion, Second Brigade, N. G.	April 25, 1877	May 9, 1877	Per S. O. No. 10, C. S. 1877.
McDorman, J. F.	Junior First Lieutenant, Sacramento Light Artillery (unattached), Fourth Brigade, N. G.	July 9, 1877	July 11, 1877	Per S. O. No. 15, C. S. 1877.
Pilot, Germain F.	Captain, San José Zouaves (unattached), Second Brigade, N. G.	Aug. 29, 1876	Sept. 4, 1876	Per S. O. No. 23, C. S. 1876.
Peters, J. D.	Major and Quartermaster, staff of the Brigadier-General commanding Third Brigade, N. G.	Oct. 25, 1876	Nov. 20, 1876	Per S. O. No. 32, C. S. 1876.
Shoehan, J. F.	Major and Assistant Adjutant-General, staff of the Brigadier-General commanding Fourth Brigade, N. G.	Aug. 13, 1875	Sept. 6, 1875	Per S. O. No. 17, C. S. 1875.
Sperling, Frank	First Lieutenant, Hewson Rifles, Company "H," First Infantry Regiment, Second Brigade, N. G.	Nov. 8, 1875	Nov. 15, 1875	Per S. O. No. 22, C. S. 1875.
Smith, Ansel	Second Lieutenant, Stockton Guard (unattached), Third Brigade, N. G.	Dec. 28, 1875	Dec. 31, 1875	Per S. O. No. 27, C. S. 1875.
Sherburn, J. B.	Captain, Sacramento Light Artillery (unattached), Fourth Brigade, N. G.	Jan. 7, 1876	Jan. 11, 1876	Per S. O. No. 1, C. S. 1876.
Stoekton, E. A.	Major and Surgeon, on staff of the Brigadier-General commanding Third Brigade, N. G.	May 4, 1876	June 5, 1876	Per S. O. No. 8, C. S. 1876.
Savage, R. H.	Colonel, commanding Second Infantry Regiment, Second Brigade, N. G.	Aug. 15, 1876	Sept. 11, 1876	Per S. O. No. 24, C. S. 1876.
Strout, Marcellus H.	Second Lieutenant, Summer Light Guard, Company "E," First Infantry Regiment, Second Brigade, N. G.	Nov. 13, 1876	Jan. 3, 1877	Per S. O. No. 1, C. S. 1877.
Thompson, D. W. C.	Major-General, commanding N. G.	Nov. 15, 1875	Nov. 23, 1875	Per G. O. No. 6, C. S. 1875.

TABLE J—Continued.

NAME.	Rank, Etc.	Date of Res-ignation.	Date of Ac-ceptance.	Remarks.
Thain, Hamilton W.-----	Lieutenant-Colonel, commanding Fourth Infantry Regiment, Fourth Brigade, N. G.-----	July 5, 1876--	Aug. 23, 1876--	Per S. O. No. 22, C. S. 1876.
Von Senden, G. D.-----	Captain, Germania Rifles, Company "D," Second Infantry Reg-iment, Second Brigade, N. G.-----	Dec. 22, 1876--	Jan. 3, 1877--	Per S. O. No. 1, C. S. 1877.
Wright, H. Nelson-----	First Lieutenant and Quartermaster, on staff of Colonel com-manding First Infantry Regiment, Second Brigade, N. G.-----	Feb. 1, 1877--	May 25, 1877--	Per S. O. No. 12, C. S. 1877.
Weller, C. L.-----	Lieutenant-Colonel and Ordnance Officer on staff of the Major-General commanding N. G.-----	July 25, 1877--	July 31, 1877--	Per S. O. No. 16, C. S. 1877.
<i>Died.</i>				
NAME.	Rank, Etc.	Date of Death.		
Burt, J. M.-----	Major and Paymaster, on staff of the Brigadier-General commanding Third Brigade, N. G.-----	May 21, 1876.		
Cary, Eugene W.-----	Captain, Wolfe Tone Guard, Company "C," Third Infantry Regiment, Second Brigade, N. G.-----	August 4, 1875.		
De Haven, William N.-----	Major and Engineer Officer, on staff of the Brigadier-General commanding Fifth Brigade, N. G.-----	March 12, 1876.		
Montgomery, John N.-----	Major and Commissary, on Staff of the Brigadier-General commanding Fifth Brigade, N. G.-----	June 2, 1876.		
Valliant, A. C.-----	Major and Commissary, on staff of the Brigadier-General commanding Fourth Brigade, N. G.-----	January 20, 1877.		

GENERAL AND SPECIAL ORDERS, AND CIRCULARS.

GENERAL ORDERS.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, November 23d, 1875. }

[General Orders, No. 6.]

I. Major-General D. W. C. Thompson, commanding Division N. G. C., having tendered his resignation, the same is hereby accepted, to take effect from this date.

II. In accepting this resignation, the Commander-in-Chief desires specially to recognize the zeal and efficiency manifested by the Division Commander during his term of service.

III. Brigadier-General James Coey has been appointed Major-General Commanding Division N. G. C.

He will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

L. H. FOOTE,
 Adjutant-General, California.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, November 23d, 1875. }

[General Orders, No. 7.]

The following appointment in the National Guard of California, made by the Governor, is promulgated for the information of all concerned:

Colonel John McComb, of San Francisco, to be Brigadier-General of the Second Brigade, N. G. C., with rank from November 23d, 1875.

He will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

L. H. FOOTE,
 Adjutant-General, California.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, November 27th, 1875. }

[General Orders, No. 8.]

I. Brigadier-General Wm. L. Campbell having tendered his resignation of the command of the Fourth Brigade, N. G. C., the same is hereby accepted, to take effect from this date.

II. Colonel Wentworth T. Crowell, of Sacramento, has been appointed Brigadier-General of the Fourth Brigade, N. G. C., vice Wm. L. Campbell, resigned, with rank from date.

He will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

L. H. FOOTE,
 Adjutant-General, California.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, December 13th, 1875. }

[General Orders, No. 9.]

The following is promulgated for the information of the National Guard and persons having business with this department:

I. P. F. Walsh is appointed Adjutant-General of the State of California, with rank of Brigadier-General, from date, vice L. H. Foote, term expired.

He will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

L. H. FOOTE,
 Adjutant-General, California.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, December 23d, 1875. }

[General Orders, No. 10.]

The following is hereby promulgated for the information of the National Guard and persons having business with this department:

I. George E. Aiken is appointed Assistant Adjutant-General, on the staff of Adjutant-General P. F. Walsh, vice Wm. E. McArthur, term expired.

He will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

P. F. WALSH,
 Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, January 27th, 1876. }

[General Orders, No. 1.]

The following appointment in the National Guard is promulgated for the information of all concerned :

I. George R. Vernon to be Major-General of the National Guard, vice James Coey (not confirmed by the Senate), with rank from January 20th, 1876.

He will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, March 7th, 1876. }

[General Orders, No. 2.]

The Commander-in-Chief desires to express his recognition of the promptness with which a portion of the Second Brigade, National Guard, responded to the unexpected call occasioned by the recent fire at the State Prison, San Quentin, and takes pleasure in causing honorable mention to be made of the following :

Brigadier-General John McComb, commanding Second Brigade, National Guard.

Lieutenant-Colonel Oscar Woodhams, commanding detachment.

Lieutenant Prentice M. Clarkson, Company A, Second Infantry Regiment, acting Adjutant.

Sergeant L. H. Nickerson, Quartermaster Sergeant.

Sergeant P. J. Gallagher, Commissary Sergeant.

Captain George Humphreys, commanding Company C, First Infantry.

Captain Alfred J. Fritz, commanding Company A, Second Infantry.

Also of the eighteen men of Company C, First Infantry; and twenty-six of Company A, Second Infantry, comprising detachment.

At the particular request of Brigadier-General John McComb, especial mention of Captain James Armstrong, commanding Hewston Guard (unattached), Petaluma, is hereby made for promptness in assembling forty men of his command, uniformed and equipped, with ammunition and wagon transportation.

Mention is hereby made of the following officers and men who reported for service in case a second detachment was required :

Captain H. J. Burns, Company E, First Infantry.

Lieutenant E. O. Hunt, Company E, First Infantry.

Lieutenant George Vaughan, Company C, First Infantry.

Lieutenant T. J. O'Keefe, Company B, First Infantry.

And ninety-six men of First Infantry Regiment.

Captain F. W. Pierce, Company B, Second Infantry.

Captain George Cantus, Company C, Second Infantry.

Lieutenant L. Siebe, Company C, Second Infantry.

And one hundred and forty-two men of Companies B and C, Second Infantry.

The attention of the respective commanders of brigades, regiments, battalions, and unattached companies, is directed to the necessity of having their commands in a thorough and available state of discipline, prepared at any moment to assemble and report for duty. It is mainly for such emergencies that the National Guard is fostered and encouraged by the State, and its usefulness and efficiency can be best determined by its conduct on such occasions.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, April 4th, 1876. }

[General Orders, No. 3.]

The following appointments in the National Guard, made by the Governor, are promulgated for the information of all concerned :

I. E. M. Sanford to be Brigadier-General of the First Brigade, N. G., vice Phineas Banning, term expired, with rank from February 14th, 1876.

II. J. G. Wall to be Brigadier-General of the Sixth Brigade, N. G., vice John C. Schmidt, term expired, with rank from February 18th, 1876.

III. Edward Canavan to be Brigadier-General of the Third Brigade, N. G., vice Thomas E. Ketchum (not confirmed by the Senate), with rank from April 3d, 1876.

IV. J. G. Martine to be Brigadier-General of the Fourth Brigade, N. G., vice W. T. Crowell (not confirmed by the Senate), with rank from April 3d, 1876.

They will be obeyed and respected accordingly.

By order of the Commander-in-Chief,

P. F. WALSH,
Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, April 13th, 1876. }

[General Orders, No. 4.]

I. Brigade commanders will direct the regimental, battalion, and company commanders in their respective brigades to issue orders to their several commands for parade and target practice during the month of May, as required by law.

II. Such parade and target practice may be held on any day of the week in the month designated, excepting Sundays.

III. Reports must be made through the usual channels to this office prior to the 15th of June. Blanks for that purpose will be furnished upon requisition made on Brigade Headquarters.

IV. Each man will fire five (5) shots at a white target, six feet by four, divided into four parts: Bull's eye, black circle eight inches in diameter: each hit in this circle giving a credit of five (5) points. Center, twenty-six inch (in diameter) circle; each hit in this circle giving a credit of four (4) points. Inner, forty-six inch (in diameter) circle: each hit in this circle giving a credit of three (3) points. Outer, all the rest of the target; each hit therein giving a credit of two (2) points.

V. The distance for companies armed with Springfield rifles, cal. 45, model 1873, will be two hundred (200) yards; pull of trigger, six (6) lbs.

VI. The distance for companies armed with Springfield rifles, cal. 58, model 1862, will be one hundred and fifty (150) yards.

VII. The distance for cavalry shall be thirty (30) yards.

VIII. Artillery companies will use such targets as is usual for their respective pieces, and conform to such distance as the formation of the locality selected for practice will permit.

By order of the Commander-in-Chief,

P. F. WALSH,
 Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, April 14th, 1876. }

[General Orders, No. 5.]

J. G. Martine having tendered his resignation as Brigadier-General Fourth Brigade, N. G., the same is hereby accepted, to take effect from this date.

By order of the Commander-in-Chief,

P. F. WALSH,
 Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, May 17th, 1876. }

[General Orders, No. 6.]

The following is promulgated for the information of the National Guard:

I. The Staff of the Governor, the Commander-in-Chief, consists of the following officers:

Brigadier-General P. F. Walsh, Adjutant-General.

Colonel Chalmers Scott, Chief Engineer.

Colonel William Harney, Paymaster-General.

Colonel Bernard D. Murphy, Judge Advocate-General.

Colonel J. Campbell Shorb, Surgeon-General.

Lieutenant-Colonel O. Livermore, Aid-de-Camp.

Lieutenant-Colonel James C. Logan, Aid-de-Camp.

Lieutenant-Colonel J. Henly Smith, Aid-de-Camp.

Lieutenant-Colonel James H. Budd, Aid-de-Camp, vice Wm. M. Gwin, Jr., declined.

Lieutenant-Colonel Charles E. Travers, Aid-de-Camp.

Lieutenant-Colonel Abraham Newman, Aid-de-Camp.

They will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

P. F. WALSH,
 Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, August 25th, 1876. }

[General Orders, No. 7.]

I. A strict conformity with the requirements of section one thousand nine hundred and seventy, relative to annual musters and inspections, is hereby enjoined on all commanding officers of the National Guard. Blank muster rolls will be issued from this office to brigade headquarters, and can be obtained by application thereto.

II. Particular attention will be given to the correct recording of enlistments, as claims for

annual allowances, as well as the legal membership of companies, will be determined by the number who have enlisted or reënlisted within three years.

III. Reënlistments will consist in the readministering of and subscribing to the oath of service (section one thousand nine hundred and twenty-one), "which oath, certified by the officer administering the same, must be returned to the Adjutant-General, and be preserved with the rolls of companies."

IV. All changes since last muster and inspection will be accurately stated, thus completing the record of membership, and preserving a complete history of the same.

V. A correct list of the State property in possession of the different commands will be made under the proper headings. Particular attention is directed to this requirement, as it has been, heretofore, too frequently neglected.

VI. The respective brigade commanders are charged with the execution of this order, and are directed to take such measures as will insure a correct and thorough muster and inspection; and will, if they deem it advisable, order the same to take place on the 9th of September.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA,
ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, March 5th, 1877. }

[General Orders, No. 1.]

I. Brigadier-General W. T. Crowell having tendered his resignation of the command of the Fourth Brigade, N. G., the same is accepted, to take effect from March 3d, 1877.

II. M. S. Horan, of Sacramento, is hereby appointed Brigadier-General of the Fourth Brigade, N. G., vice W. T. Crowell, resigned, with rank from March 3d, 1877. He will be obeyed and respected accordingly.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA,
ADJUTANT-GENERAL'S OFFICE, SACRAMENTO April 13th, 1877. }

[General Orders, No. 2.]

I. The National Guard is hereby ordered to parade in conformity with law, for target practice, during the month of May (Sundays excepted).

II. Each man will fire five (5) shots at a white target, six feet by four, divided into four parts: "Bull's eye," black circle eight inches in diameter; each hit in this circle giving a credit of five (5) points. "Center," twenty-six inch (in diameter) circle; each hit in this circle giving a credit of four (4) points. "Inner," forty-six inch (in diameter) circle; each hit in this circle giving a credit of three (3) points. "Outer," all the rest of the target; each hit therein giving a credit of two (2) points.

III. The distance for companies armed with Springfield rifles, cal. 45, model 1873, will be two hundred (200) yards; pull of trigger, not less than six (6) lbs.

IV. The distance for companies armed with Springfield rifles, cal. 58, model 1862, will be one hundred and fifty (150) yards.

V. The distance for cavalry will be thirty (30) yards.

VI. Artillery companies will use such targets as is usual for their respective pieces, and conform to such distance as the formation of the locality selected for practice will permit.

VII. Blank forms of Target Reports have been forwarded to the respective brigade headquarters. Particular care should be observed in filling them out, and commanders are instructed to forward them, through the proper military channels, before the tenth of June, so as to enable the Adjutant-General to make reference to the results in his biennial report.

VIII. Brigade commanders will, at their discretion, issue such additional orders as may be necessary, according to the circumstances of their respective commands, to insure the requirements of these general orders.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SPECIAL ORDERS.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA,
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, October 20th, 1875. }

[*Special Orders, No. 19.*]

Company "B," Second Infantry Regiment, Second Brigade, N. G. C., has changed its name from "Stratman Zouaves," and will hereafter be designated as the "Thompson Rifles."

By order of the Commander-in-Chief.

L. H. FOOTE,
 Adjutant-General, California.

SACRAMENTO, November 23d, 1875.

[*Special Orders, No. 25.*]

I. Colonel W. T. Crowell, commanding Fourth Infantry Regiment, Fourth Brigade, N. G. C., will take command of all companies of the National Guard in Sacramento, on the occasion of the inauguration of the Governor elect, and will cause due notice to be made of the day fixed upon by the Legislature for the ceremony, communicating that information by telegram to such commands in other brigades as may notify him of their intention of being present.

II. Colonel Crowell will issue all commands necessary for the execution of the intent of this order.

By order of the Commander-in-Chief.

L. H. FOOTE,
 Adjutant-General, California.

SACRAMENTO, February 5th, 1876.

[*Special Orders, No. 5.*]

Brigadier-General W. T. Crowell, commanding Fourth Brigade, N. G. is hereby directed to detail one commissioned officer, and as many privates as he may think proper, from the companies of the National Guard, located in Sacramento, to act as a guard over the remains (lying in state at the State Capitol), of the late Hon. J. W. Mandeville, to report to Major George E. Aiken, at these Headquarters, Sunday February 6th, 1876, at nine o'clock A. M.

By order of the Commander-in-Chief.

P. F. WALSH,
 Adjutant-General.

Official: Geo. E. Aiken,
 Assistant Adjutant-General.

SACRAMENTO, February 21st, 1876.

[*Special Orders, No. 6.*]

I. The application of citizens and residents of Yreka, Siskiyou County, desirous of organizing a company of infantry, having been approved—Brigadier-General Charles Cadwalader, commanding Fifth Brigade, N. G., will, upon receipt hereof, issue all orders necessary, and appoint some person resident of the county, to organize said company according to the provisions of the Militia Code.

II. Copies of orders, a record of proceedings, and muster rolls, will be duly transmitted to this office through Brigade Headquarters.

By order of the Commander-in-Chief.

P. F. WALSH,
 Adjutant-General.

SACRAMENTO, July 11th, 1876.

[*Special Orders, No. 14.*]

The Governor and Commander-in-Chief hereby expresses his appreciation of the display made by the United States forces, and the troops of the Second Brigade, N. G., on the occasion of the review, target practice and other field ceremonies and exercises, held in San Francisco, on July 3d and 4th, 1876, in commemoration of the Centennial of American Independence.

He desires particularly to compliment the Second Brigade, N. G. for its advanced state of perfection, in appearance, deportment, and proficiency in drill, and to express the hope, that it will be its continued aim to keep so advanced in all the requirements of the service, that it may be at all times prepared to serve the State efficiently and promptly, and continue to be worthy of popular respect and general approbation.

By order of the Commander-in-Chief.

P. F. WALSH,
 Adjutant-General.

SAN FRANCISCO, July 15th, 1876.

[Special Orders, No. 15.]

At the request of Major-General George R. Vernon, commanding National Guard, the following officers on the staff of the Governor and Commander-in-Chief, are hereby detailed for special duty, to serve on a general court-martial, and will report immediately at the headquarters of the Major-General commanding National Guard, at San Francisco:

Colonel Chalmers Scott, Colonel William Harney, Lieutenant-Colonel O. Livermore, Lieutenant-Colonel J. H. Smith, Lieutenant-Colonel Charles E. Travers.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, August 5th, 1876.

[Special Orders, No. 18.]

At the request of Captain R. H. Orton, commanding Franklin Light Infantry, Company "D," First Infantry Regiment, Second Brigade, National Guard, and on the recommendation of Lieutenant-Colonel Oscar Woodhams, commanding said regiment, pardon is hereby granted to Drummer C. J. Schanal, who was dishonorably discharged from the above named company, August fourteenth, eighteen hundred and seventy-four.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, August 23d, 1876.

[Special Orders, No. 19.]

Junior Second Lieutenant John C. McDonald, Company "A," First Cavalry Battalion, Second Brigade, National Guard, having removed from the State, said office is hereby declared vacant, and the Brigadier-General commanding Second Brigade, National Guard, will issue the necessary orders for an election to fill the same.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, February 23d, 1877.

[Special Orders, No. 2]

I. Brigadier-General J. G. Wall, commanding Sixth Brigade, National Guard, will, without delay, detail proper officers to inspect the ordnance, ordnance stores, etc. (belonging to the State of California), in possession of the following independent companies:

Crescent City Guard, Crescent City.

Humboldt Guard, Arcata.

Smith River Independent Riflemen, Smith River.

II. The Inspecting Officers will report the number and condition of the ordnance, ordnance stores, etc., in possession of each of said companies, and forward the same, through the regular military channels, to this office.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, March 22d, 1877.

[Special Orders, No. 4.]

At the request of First Lieutenant James Mulvenna, commanding San José Zouaves, (unattached,) Second Brigade, National Guard, pardon is hereby granted to Charles Desimone, who was dishonorably discharged from the above named company, in July, 1875.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, March 31st, 1877.

[*Special Orders, No. 5.*]

I. The organization known as the Fourth Infantry Regiment, Fourth Brigade, National Guard, is hereby disbanded, in compliance with Sections 1913 and 1982 of the Political Code, and the field and staff officers thereof are hereby mustered out of the State service.

II. The five (5) remaining companies of the late Regiment, viz:

Company "A," City Guard, of Sacramento,

Company "C," Nevada Light Guard, of Nevada City,

Company "D," Placerville City Guard, of Placerville,

Company "E," Yuba Light Infantry, of Camptonville,

Company "G," Sarsfield Guard, of Sacramento,

Are hereby formed into a battalion, to be known as the First Battalion of Infantry, Fourth Brigade, National Guard.

III. Brigadier-General M. S. Horan, commanding Fourth Brigade, N. G., will immediately order an election for a Major, to command the First Battalion of Infantry, Fourth Brigade, N. G.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, April 5th, 1877.

[*Special Orders, No. 7.*]

I. At the request of Captain Robert Cleary, commanding Company "E," Third Infantry Regiment, Second Brigade, N. G., and approval of the regimental and brigade commanders, a vacancy is hereby declared in the Second Lieutenantcy of said company, owing to the failure of Second Lieutenant William Mannix to report to his commanding officer for duty, and being absent without leave.

II. Brigadier-General John McComb, commanding Second Brigade, N. G., is hereby instructed to order an election to fill said vacancy, at the same time and place as the election for First Lieutenant will be held.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, April 9th, 1877.

[*Special Orders, No. 8.*]

I. For the purpose of having all the companies of the First Battalion of Infantry, Fourth Brigade, N. G., furnished with arms of a uniform style, the commanding officers of each of the following companies of the above named battalion, viz: Nevada Light Guard, Company "C," Placerville City Guard, Company "D," Yuba Light Infantry, Company "E," will, upon the receipt of these orders, forward, in suitable packages, directed to the Adjutant-General, at Sacramento, California, ten (10) Springfield rifles, caliber forty-five.

II. Receipts for the same will be duly transmitted.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

SACRAMENTO, May 15th, 1877.

[*Special Orders, No. 11.*]

On application of Captain R. H. Orton, commanding Franklin Light Infantry, Company "D," First Infantry Regiment, Second Brigade, N. G., pardon is hereby granted to private John Roche, who was dishonorably discharged from the above named company. Said pardon to take effect from April 30th, 1877.

By order of the Commander-in-Chief.

P. F. WALSH,
Adjutant-General.

CIRCULARS.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, July 17th, 1876. }

[Circular No. 1.]

In accordance with the provisions of an Act approved March 30th, 1876, commanders of companies will make out on the accompanying blanks, claims for the twenty-sixth and twenty-seventh fiscal years (claims for the twenty-fifth fiscal year having been already presented and allowed), and forward them without delay, through the regular channels, to these headquarters.

Claims will be made out according to instructions on blanks; and it will be particularly understood, that the difference, if any, between actual expenditures, and amount already received from the State, is what the claim will be made out for—not the difference between thirty-five (35) dollars and one hundred (100) dollars per month—*regardless of expenditures.*

No claim will be allowed for expenditures exceeding one hundred (100) dollars per month, including amount already paid for twenty-sixth and twenty-seventh fiscal years.

To facilitate the settling of these accounts, it is expected that commanders of companies will observe these instructions, together with the instructions on blank forms.

By order of

P. F. WALSH,
 Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
 ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, May 7th, 1877. }

[Circular No. 1.]

The undersigned desires to inform the National Guard that he has received from the Adjutant-General of New York an invitation to send a team of twelve of our State Guardsmen to compete in an Inter-State Target Match, to take place during next September, at Creedmoor, New York.

The prize (a bronze statue of the Soldier of Marathon), is presented by the State of New York, and is held, during the interval between the annual matches, by the State winning it. Its possession is being recognized as the Badge of Championship in Rifle Practice in the National Guard of the United States; while the contests tend, as expressed by Adjutant-General Townsend in his invitation, "to promote a spirit of friendly rivalry between the uniformed militia of the different States." Two matches have already taken place, and the prize is now held by the National Guard of the State of Connecticut.

I feel assured that if California enters the coming contest, if she does not bear away the prize she will not fail to make a creditable record.

The attention of the National Guard has been called to this subject already by a portion of the press, and in the Second Brigade (General John McComb, commanding), through General Orders, relative to target practice.

The California Rifle Association, through its Board of Directors, has already signified its willingness to me to second any effort the National Guard may make in this direction, and at a meeting of said Board held on the 4th instant, to which I was invited, the following resolution was passed:

"*Resolved*, That the California Rifle Association request Brigadier-General P. F. Walsh, Adjutant-General of California, to inform the officers of the National Guard of the invitation of General Townsend, Adjutant-General of New York, to send a team of National Guardsmen to Creedmoor, and to ask them to signify their willingness to assist in selecting and equipping such a team from the California National Guard; and, also, to invite all the commissioned officers of the National Guard to meet with the California Rifle Association in San Francisco, on the evening of May 16th, in La Grande Armory, to arrange a plan for carrying out this object."

You are hereby requested to notify me at the earliest opportunity, preceding the meeting of the 16th, of your approval or otherwise of the project. Officers are requested to canvass their respective commands, and report what they are willing to contribute towards the proposed enterprise, and it is hoped that as many as can possibly attend will be present at the meeting, in San Francisco, on the 16th instant, at which final action will be determined.

P. F. WALSH,
 Adjutant-General.

GENERAL HEADQUARTERS, STATE OF CALIFORNIA, }
ADJUTANT-GENERAL'S OFFICE, SACRAMENTO, May 7th, 1877. }

[Circular No. 2.]

Duplicate discharges, or certificates of service, of California Volunteers, will not be issued from these Headquarters *except* upon application of the party entitled to the same. An affidavit, setting forth all facts relative to his term of service in the California Volunteers, with name of company and regiment, and to the disposition made of his original discharge—certified to by one or more witnesses that he is the person represented in the affidavit—must accompany such application.

By order of

P. F. WALSH,
Adjutant-General.

REPORTS

OF

MAJOR-GENERAL AND BRIGADE COMMANDERS,

AND OF THE

PROFESSOR OF MILITARY SCIENCE AND TACTICS, UNIVERSITY OF CALIFORNIA.

REPORT OF MAJOR-GENERAL.

HEADQUARTERS MAJOR-GENERAL COMMANDING NATIONAL GUARD, }
SAN FRANCISCO, July 28th, 1877. }

To Brigadier-General P. F. WALSH,
Adjutant-General of California,
Sacramento, California:

GENERAL: I have the honor to submit the following report:

Having, since my appointment, in January, 1876, visited most of the companies in the State, or received a report from my Inspector-General of the same, I am prepared to report of their discipline, general appearance, and efficiency. With but few exceptions, the National Guard is well officered, has excellent discipline, is provided with good armories, arms, and accoutrements, well cared for, and I notice a vast improvement during the past year in drill and rifle practice.

Many of the companies have not yet received the new arms, and are exceedingly anxious to obtain them. I trust that means will at once be employed to secure the breech-loaders, as it causes dissatisfaction to have only a part of the troops provided with them.

I respectfully recommend a revision of the State law for the government of our National Guard. I am now engaged in preparing one, to submit to the next Legislature, which, I believe, has many improvements. It will be duly forwarded to the Commander-in-Chief for his approval. I also respectfully recommend that a "Camp of Instruction" be ordered, in each brigade, to assemble in the field, in the month of May, each year, to last three days, for the benefit of the officers and men, knowing that a marked improvement would be the result.

The interest in rifle practice still continues. In carefully comparing the scores of the troops of the different States at their target practice, I am pleased to see that those of our own State are uniformly more successful.

The National Guard of this State have, by honorable competition, selected a team to compete at the "Inter-State Match," at Creedmoor, this fall, and are contributing liberally to the fund to defray the expenses of the team to the East and return. From the practice, I believe we will secure the prize.

Those companies not provided with the new arms have not taken the interest in practice that they would had they been furnished with the new style of musket. They were, therefore, unable to compete for places in the team.

I shall use my utmost endeavors to organize a "National Guard Rifle Association," in which the officers and members shall belong exclusively to the National Guard, as I am opposed to others either making laws to govern, giving orders, or keeping scores at target practice, or in any manner dictating to our citizen soldiery.

The present riotous proceedings throughout the Union have clearly demonstrated to the citizens of our State how powerless the police are on such occasions, and how necessary the National Guard is to preserve life, property, and good order.

So few inducements are now offered for enlistment, there is difficulty in keeping organizations up to the proper standard. I trust certain privileges will be extended by law, so that in the future this defect will be remedied.

The National Guard ask of our State Legislature only the support and those favors which are granted their brother companions in arms in other States, no more.

In an experience of many years in the United States army, and militia, I have seldom, if ever, seen as fine a body of men so willing and cheerful, at all times, to obey orders as the National Guard of California.

I am very respectfully, your obedient servant,

GEORGE R. VERNON,
Major-General Commanding National Guard of California.

REPORTS OF BRIGADIER GENERALS.

HEADQUARTERS SECOND BRIGADE, N. G. }
SAN FRANCISCO, CALIFORNIA, July 30th, 1877. }

Brigadier-General P. F. WALSH,
Adjutant-General, California,
Sacramento, California:

GENERAL: I have the honor to submit the following report of the condition of the Second Brigade, National Guard:

Soon after assuming command of the brigade, in November, 1875, I ordered an inspection of all the companies, to ascertain the amount of property actually in possession of the companies, and its condition, the reliable strength of each command, and the proficiency of each individual soldier.

The inspections were admirably conducted by Colonel William R. Sinedberg, a thoroughly accomplished officer, who had earned his exemption from service by the loss of a leg in the late war, but though retired from the regular army as Lieutenant-Colonel, and therefore already in possession of all the distinction that could be conferred on him by appointment to any position in my bestowal, he has willingly given his time and his knowledge for the benefit of the National Guard, as Major and Brigade Inspector. I desire particularly to call attention to the elaborate reports made by him on each company inspected, copies of which are herewith forwarded, and to recommend that he be allowed reasonable compensation, under the section of the Codes providing for payment for such services.

From these reports, and from personal observation made at the several parades and musters of the troops of the Second Brigade, I am able to report that the companies and regiments of the brigade will compare favorably with any similar body of troops in the United States.

Some method should be devised by which every brigade in the State could have at least biennial encampments, and "field days" at least yearly, without the expense attaching, as it now does, to the soldier, who gives his time and money without the paltry relief of exemption from jury duty, which many other States allow, and with the additional payment for time when under arms. While California is ahead of some of the States of the Union in her care for the interests of the National Guard, she is also far behind many States where the actual necessities, as demonstrated by past experiences, is not as great as with us, located, as we are, away from the great centres of population, and without the natural resources possessed by other communities.

A strong, well disciplined, well drilled, and properly officered National Guard is one of the safest and surest safeguards of a State. Encampments and field days are among the most useful agencies in the promotion of efficiency.

The condition in which the brigade was found when turned over by General Coey was such as to warrant the continuance of the energy displayed by him, which had been an unwonted surprise to the command.

The improved forty-five caliber Springfield rifle—breech-loaders—had just been obtained and issued to the brigade, with the exceptions of the unattached infantry companies at Petaluma, Oakland, San José, and Vallejo, and a system of target practice was at once entered upon, and in which most rapid improvement is evident.

While company and regimental drills have been encouraged, the first duty of a soldier—to know how to shoot well—has been brought to the front, and instead of a rivalry between a few individual sharpshooters, whole companies and regiments became in earnest, and a spirit of emulation is manifest. Many companies own ranges at San Bruno, and the constant expenditure of powder and lead has resulted in the material for a team which takes part in the inter-State military match at Creedmoor in September, with a certainty of success, or at least an honorable position.

I would recommend that a liberal amount of ammunition be issued annually, under proper restrictions as to how the allowance shall be expended.

The target practice of the Light Battery is necessarily conducted with considerable trouble and expense, it not being practicable for the cannoner to shoulder his gun and become proficient in making good shooting by individual practice—but the law this year was complied with, and satisfactorily to the officers and men.

The Gatling guns are placed temporarily in charge of Company "A," Second Regiment Infantry, their province, in case of use, being essentially to aid that arm of the service. Practice with this arm demonstrates its effective qualities at five hundred and even twelve hundred yards; and they are unquestionably effective weapons when properly handled, and particularly for use in the streets of a city.

This seems the proper place to suggest the importance of the need for more arms in the hands of the infantry of this brigade, of the same pattern as those now in use. The Vallejo company will probably soon be in possession of the Springfield rifle, and the other unattached

companies of the brigade should have them, as well as a larger number for distribution among the companies in San Francisco, while the cavalry should receive carbines and pistols.

The recent marked improvement in the membership and morale of the San José Zouaves is entitled to mention, and the visit of the Union Guard, Company "A," Second Regiment Infantry, to Sacramento, marked an era of extraordinary marksmanship which demands special notice.

The *esprit de corps* of the Second Regiment Infantry has been greatly improved by the adoption of a handsome regimental uniform.

The records of the Assistant Adjutant-General of the brigade show that there has been great improvement in the manner of transmission of documents from the various headquarters. It is a matter of regret that the records of the brigade have not been made archives, and transmitted from each commander to his successor. There is a difficulty in obtaining reports and returns with the promptness desired from some portions of the command, and which it is not easy to correct on account of the trouble in punishing derelictions of duty in such directions.

I am firmly convinced that there are, in many respects, radical changes necessary in the military law of this State, and I trust that the code prepared by Major Samuel W. Backus, Assistant Adjutant-General of the brigade, which will be found to show much earnest thought, will, when presented before the Legislature, receive careful consideration.

The *entente cordiale* brought into existence during the connection of Generals Thompson and Coey with the National Guard, between its officers and those of the United States, it has been my happy privilege to stimulate and foster on every occasion, believing that naught but good results can flow from contact with the educated soldiers, who have been found ready to meet the advances more than half way.

The improvement in discipline and general knowledge of the duties of the soldier, shown throughout this command, are in a great measure due to the able assistance given by the members of my staff. Each has performed his duty in the position assigned him to my entire satisfaction.

To Major Samuel W. Backus, I am indebted for very efficient service in the clerical duties of the office of Assistant Adjutant-General, as well as for ready, intelligent, and efficient performance of the active duties of the position. Major Backus has devoted himself earnestly to the discharge of his duties, giving time and labor that would in any mercantile establishment bring him the return of a handsome salary. His services in the Union army have familiarized him with all the routine work of a military command.

Major Fred. G. Smith, Brigade Inspector, has reached his present position after long and faithful services in the National Guard, in nearly every position, from private of a company upwards. Major Smith is an active, intelligent, and willing officer, always found ready in every emergency.

Major C. Mason Kinne, Judge Advocate, is a gentleman who can and does grace any position assigned him. His services during the late war as Assistant Adjutant-General of the regular Brigade of Cavalry of Sheridan's Army, have fitted him for any position in our State National Guard. Major Kinne is an indefatigable worker, and devotes much of his time to his military duties.

Major R. H. Savage, Brigade Paymaster, and late Colonel of the Second Regiment Infantry, National Guard, received a military education at West Point, and graduated therefrom with high honors. His extensive experience in the regular army and on the staff of the Khedive of Egypt renders him a valuable member of any military organization. Major Savage is a thoroughly educated soldier, and renders valuable advice and assistance to our National Guard.

To Major D. W. Laird, Ordnance Officer, Frank P. McLennan, Engineer Officer, Major John Mason, Commissary, and Major J. M. Litchfield, Quartermaster, I am indebted for much valuable time and assistance in whatever duties they have been called upon to perform. Majors Laird, Mason, and Litchfield have served long and faithfully in the National Guard, making their way up from the ranks to their present positions. Dr. A. A. O'Neil, Brigade Surgeon, while not being called upon to render much professional service, has nevertheless rendered valuable assistance in other directions, being always on hand, and ready for any duty.

Captain Charles Sonntag, Aid-de-Camp, is a gentleman of intelligence, active, and shows peculiar qualifications for the position of Aid.

Sergeant-Major M. C. Byrne, a veteran of the Union army, has shown a devotion to his duties for the past three years which merits the warmest commendation.

The troops of the brigade have been called out for the following duties, required by emergencies or specified in the Codes or General Orders:

The twenty-two companies of the brigade located in San Francisco paraded for the reception of the Gatling guns, delivered in the Mechanics' Pavilion on the 9th of December, 1875.

At the fire at the State Prison, San Quentin, detailed portions of the command were sent to the scene, upon a telegraphic requisition received from Governor William Irwin, Commander-in-Chief. These details were got together upon a notice of two hours, armed and rationed, and each supplied with forty rounds of ammunition; they were ready and adequate for any emergency, but, aside from standing guard at the Prison during one night, they were not called on for further services. The Hewston Guard, stationed at Petaluma, commanded by Captain James Armstrong, a veteran of the Mexican war, were also held in readiness at their armory; and, with forty men, Captain Armstrong was ready for any requisition made upon him.

The brigade also paraded for the celebration of the anniversary of the birthday of Washington, February 22d, 1876, on which occasion Major-General Vernon reviewed the command.

For the "Field Day" at the Presidio, on the 3d of July. The Commander-in-Chief and his Staff, the Major-General and his Staff, and thirty thousand people, witnessed the evolutions of the brigade and the sham battle, with which the day's work concluded. In this, as well as in the review by the Commander-in-Chief, the United States troops at the Presidio participated. Colonel Sumner's troop of cavalry and Major Hasbrouck's battery added greatly to the impressiveness of the display. The grounds and all the facilities of the Presidio Post were courteously placed at the service of the brigade commander by the veteran General, Horace Brooks, Fourth United States Artillery, since retired for long and faithful services.

For the Fourth of July procession in honor of the Centennial Anniversary of our National Independence—which, following so closely on the arduous labors at the Presidio on the preceding day, nevertheless found the ranks of the several companies full, and the display a good one.

The Vallejo Rifles, Captain Frank O'Grady, and the Oakland Guard, Captain H. D. Ranlett, unattached companies of this Brigade, came to the city on July 2d, 1876, and remained until July 5th, taking part as a battalion in the exercises of July 3d and 4th.

For the reception of Major-General Irwin McDowell, U. S. A., Commanding Military Division of the Pacific, August, 1876.

For the annual muster of the troops, as required by law, and to commemorate the admission of California as a State, September 9th, 1876.

Under arms October 20th, 1876, in anticipation of a riot, by reason of meetings called to denounce the Chinese, and threats of attacks on the Chinese quarter.

Under arms November 7th, 1876, by orders from Major-General George R. Vernon.

The parade of the Brigade on the 22d of February, 1877 was a remarkably creditable display.

In the ceremonies of the Fourth of July celebration of 1877, the brigade participated as a part of the citizens' procession. This turn-out was one of the most brilliant ever made by the brigade. At an earlier hour on this day the brigade participated in a review, ordered for and by Major-General George R. Vernon, commanding National Guard.

I now notice the recent and last services which this brigade has been called upon to perform. On the twenty-third of July last, while the telegraph was freighted with news of terrible riots in the cities of the Eastern States, and immense destruction of life and property in Pittsburg, the Chief of Police of San Francisco notified me that a riot was feared in the evening, a public meeting having been called to "sympathize with the strikes in the east." Apprehensive that the force of police would not be able to cope with the mob, in the excited state of feeling manifested in the groups of people congregating on the streets, Chief of Police Ellis notified me to hold the troops of the Second Brigade in readiness to render him any needed assistance.

All the companies located in San Francisco were ordered to assemble in their armories to await orders. Commanders of battalions were directed to issue ammunition, and take measures against surprise if the mob should determine to make the depots of arms the points of attack. The cavalry were ordered to be ready for any emergency; the Light Battery was provided with horses and ammunition, and two of the four Gatling guns were temporarily attached to the First Regiment Infantry, Colonel Grannis; Colonel Smedberg, Second Regiment Infantry, retaining two for use by Company "A," of his command, Captain A. J. Fritz. Several times during the night the Chief of Police sent word that the rioters were gaining in numbers, and that it would be necessary in a few minutes to bring out the troops. A staff officer was detailed to wait in the office of the Chief of Police, to bring the orders without delay; but after each alarm came the order, "hold the troops in the armories until further orders." During this time citizens came flocking in to the headquarters of the brigade with most alarming reports of the extent of the mob, and the damage it was executing on the washhouses—even that the firemen were prevented from extinguishing an incendiary fire on the corner of Geary and Leavenworth streets; also, that the incendiaries, in full sight of the few policemen in that neighborhood, were endeavoring to prevent the Chinese occupants from leaving the burning building. These parties were requested to convey this information to the Chief of Police, as I was governed by the law and could not order the troops into service until called upon by the officials designated in the Codes. I also sent staff officers to the Chief of Police, to inform him of the reports coming to me, and begging that he would send sufficient force of police, or call on the troops, who were all in their armories and anxious to be called on for the duty which seemed imminent. Several times these messages were delivered to the Chief of Police, and orders were apparently given to send police officers to the points indicated, but they had no success in preventing a continuance of the disorders, nor could I learn of any arrests being made, though twenty-eight different buildings were attacked and raided.

At California and Dupont Streets a platoon of policemen succeeded in dividing the crowd into two parts, and, as the parts did not reunite, the mob became less formidable, and finally broke up into little knots, who went off in different directions, attacking the Chinese washhouses lying in out-of-the-way places.

Some time after midnight I received a message from the Chief of Police to dismiss the troops, as he felt able to preserve the peace of the city with the police force, though I could not learn that any of the parties who raided the Chinese wash-houses were arrested, notwithstanding the offenses, in some cases, were committed in full view of the force detailed to protect the localities which invited attack from the mob on their way to Chinatown, which would naturally be the objective point of any body of excited people called together under the circumstances of the meeting referred to.

Feeling that too much was risked on the power of the small force of police (only one hundred and twenty all told), and that as the troops had not been called upon at the early stages of the outbreak, and the rioters had devastated with impunity, the difficulty in suppressing on the succeeding night would be greater, necessitating a larger destruction of life when the troops should finally be brought out into action, and that, as arson had been committed without punishment or even inconvenience to the offenders, there would undoubtedly be a resort to the torch of the incendiary in many quarters, unless there could be some means devised of showing to the riotous element that the troops would be sustained in the most severe measures when called into action, I invited two hundred representative citizens to meet in the Chamber of Commerce, to take such action as might be deemed necessary, in view of the fact that the rioters at Pittsburg were at first apparently encouraged by the citizens of that unfortunate place.

The result of that meeting was the formation of a Committee of Safety, to give moral support to the officers of the law, and provide means for a permanent guard at the private and public depots of arms until the excitement should pass away.

It was distinctly understood that the ranks of the companies of the National Guard should be strengthened, and every means provided for rapid assembling and effective use of the troops when the agreed signal should be given.

In the haste to make immediate use of the recruits who flocked to join the ranks of the Committee of Safety, these men were enrolled as special policemen, armed with clubs, and sent out to patrol the streets. A conflict was brought on at the fire on Beale Street Wharf, in which stones were freely used by the hoodlums, and some severe blows were given by the Safety Committee men. One of the Safety men was unfortunately killed by the accidental discharge of the pistol of a comrade, and at first it was thought he had fallen a victim to one of the shots of the mob. This had the effect to make the volunteer policemen unwilling to do further duty unless they were provided with arms. All this time the State troops were on duty, ready to respond at any point in ten minutes from the time of issuing the order, but the Chief of Police made no use of them, excepting to request that they be kept ready for immediate call.

The President of the Committee of Safety notified His Excellency, Governor Irwin, that arms had been obtained from the Benicia Arsenal, and requested that the State authorities would accept the arms and make some disposition of them. Acting under orders from the Commander-in-Chief, I sent an escort of troops to the wharf to guard the arms at midnight of the 24th of July, and to escort them to the places designated by Adjutant-General P. F. Walsh. On the requisition of the Chief of Police, one thousand rifles, three hundred carbines, and thirty pistols were issued to him, and delivered to the special policemen, who were again called upon to patrol the streets, with the National Guard still kept in their armories waiting orders.

When the Chief of Police made a requisition for another issue of arms, His Excellency referred him to the fact that disciplined troops, accustomed to the use of arms, and trained to habits of obedience to the orders of their officers, were in waiting to be called upon, and that he should decline to issue any more arms to undisciplined men while these troops were kept in idleness; if the Chief of Police felt himself unable to cope with the riotous element with the men and arms under his command, and he desired a further issue of arms, the request would be met by furnishing arms and men to use them—the State troops of the Second Brigade.

On that evening—July 29th—at seven o'clock, I received from the Chief of Police an order to call out the troops, and put them on duty at designated places. At eight o'clock the companies were on the way to the different rendezvous, and remained on duty till five o'clock the next morning, when they were dismissed, under orders received from headquarters of the Chief of Police, who stated that quiet had been restored in the city, and that there would be no further use for the troops.

I am, General, very respectfully, your obedient servant,

JOHN McCOMB,
Brigadier-General Commanding.

HEADQUARTERS THIRD BRIGADE, N. G.,
STOCKTON, California, July 26th, 1877. }

To General P. F. WALSH,
Adjutant-General, California,
Sacramento, California :

GENERAL: I have the honor to present the following report relative to the Third Brigade:

On assuming command of the brigade in April, 1876, I found the Stockton Guard then (as it is at present), the only company in the brigade. I am pleased to state that it is in a very fine condition and under a very high degree of discipline and efficiency.

In July, 1876, the company was ordered to report to the Sheriff of San Joaquin County for duty at the County Jail. A full report having been transmitted to general headquarters at the time, I deem it unnecessary again to enter into details. Since that time I have, upon several occasions, ordered Major R. P. Nason, Brigade Inspector, to inspect the company and report the result to these headquarters. From the reports I am enabled to report that all State property is well taken care of, that the arms, especially, are in as fine condition as the day they were received, the men not being allowed to use them except at drill, parades, target practice, nor to tamper with the locks or sights.

Judging from the various reports and comments expressed by abler critics upon the soldierly bearing, good behavior, and thorough discipline and efficiency of the company when abroad, and from my own observations at a recent encampment, at drills and parades, I venture the opinion that the Stockton Guard, both as citizens and soldiers, are a credit to the State and the community in which they reside, and, as a company, second to none. Since my appointment applications for permission to organize companies at Modesto, Stanislaus County, and Visalia, Tulare County, have been received and approved by me, and referred to general headquarters, notwithstanding the fact that no vacancies existed, a fact which I much regret. But I hope the day is not far distant when these applications will be granted, thereby enabling those counties to be represented in the National Guard of the State, and the brigade to make a better showing. It affords me great pleasure to notice the increasing interest which is manifested throughout the State in rifle practice, notwithstanding the heavy expense attendant thereto, and which is cheerfully borne by the men. Ammunition, in my opinion, should be furnished by the State. That all honorable means will be used by the officers of the National Guard, with the next Legislature, to have the former allowances to companies restored, and that the number of companies will be increased to at least fifty, is my sincere hope.

The necessity for such a step and such legislation is certainly very plain, as the present condition of affairs in the eastern, western, and middle States indicate. And the signs of impending storms at home warrant the assertion, that sooner or later there will be a demand and use for, not only a well organized and efficient National Guard, which commands the respect and admiration of the people, but which, owing to its numerical strength, will be able, when called upon, to not only protect life and property, but preserve the peace.

In conclusion, I take great pleasure in returning my sincere thanks to you for prompt and valuable assistance, and the uniform courtesies shown me during our official relations.

Very respectfully, your obedient servant,

E. CANAVAN,
Brigadier-General Commanding Third Brigade, N. G.

HEADQUARTERS FOURTH BRIGADE, CALIFORNIA NATIONAL GUARD, }
SACRAMENTO, July 30th, 1877. }

To Brigadier-General P. F. WALSH,
Adjutant-General, California:

SIR: I have the honor to submit the following condensed report:

My entire command of the organized militia consists of one unattached company—Sacramento Light Artillery—and one battalion of Infantry, comprising five companies, under command of Major Thomas J. Clunie.

There is one independent cavalry company (Sacramento Hussars), which formerly belonged to this command, and, while perfectly independent, upon all occasions of public parade this company reports for service. I would most respectfully recommend that the militia laws be amended as to admit this company again into the National Guard. The company is composed of most excellent soldiers, thoroughly drilled and disciplined.

My command is in excellent condition, the deficiency appropriations of the last session of the Legislature enabling the companies to obtain new uniforms. The discipline is very good, and improving.

There is one cause of complaint, arising from the Sacramento Light Artillery (unattached), on account of the poor condition of the guns. I called the attention of General Headquarters some months ago, to this matter, and at that time no relief could be afforded. I again refer to the matter, trusting that some steps may be advised towards exchanging these guns for those more serviceable.

It is my judgment that the interest and improvement of the National Guard would be greatly enhanced if *Annual Encampments* were held, and to that end would recommend that the Legislature be applied to for a sufficient appropriation for that object. The military are of one accord upon this proposition, and in the light of the recent disturbances, both here and in the East, it would be well to be ever ready, and be in a condition to realize the old maxim, "*a soldier is never surprised.*"

Your attention is also called to one other matter, which in my judgment should be remedied, namely: In order to have good discipline, and to take proper care of the Government property, there ought to be at least one annual inspection; and of course there is more or less expense attached, and when officers give their time for the public good, it cannot be expected that they will also incur expense. I would therefore further recommend that an annual appropriation be made sufficient to pay the traveling expense of a mustering and inspecting officer.

I am, very respectfully, your obedient servant,

M. S. HORAN,
Brigadier-General Commanding Fourth Brigade, N. G.

REPORT OF PROFESSOR OF MILITARY SCIENCE AND TACTICS, UNIVERSITY OF CALIFORNIA.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS,
UNIVERSITY OF CALIFORNIA, BERKELEY, July 30th, 1877. }

Brigadier-General P. F. WALSH,
Adjutant-General of California,
Sacramento, California:

GENERAL: I have the honor to report that upon assuming charge of the department in May, 1877, I found the battalion of "University Cadets" increased from four (4) to six (6) companies, officered by six (6) Captains, seven (7) First and seven (7) Second Lieutenants, one (1) Sergeant-Major, one (1) Color-Sergeant, six (6) First and twelve (12) duty Sergeants, besides thirteen (13) Corporals. This organization, resulting from the experience of my respected predecessor, Professor W. T. Welcker, Chief of Military Instruction, I have not changed in any material respect, merely increasing the number of non-commissioned officers from among those considered by him the most efficient soldiers.

The muskets are of the old muzzle-loading Springfield pattern, unserviceable, very heavy, and totally unsuited to young men of the ages, strength, and size of the average student. Besides this, the equipments are of a kind no longer used. (These arms, etc., have been recently turned in to the Oakland Guard, unattached, National Guard, by your order.) It would be advisable, if practicable, to replace these arms by the lighter Springfield breech-loading rifled musket, cal. 45, and the equipments by the lighter ones, now used in the United States service. Three hundred of the above arms, etc., have been applied for; if furnished they will supply the needs of the battalion for several years. The books used will be "Upton's United States Tactics, Infantry," and "Welcker's Military Lessons," for the three lower classes. The Senior Class will be instructed in making out a few papers indispensable to officers and non-commissioned officers of volunteers, such as the ration-return, the requisition for ordnance and ordnance stores, and that for clothing; also, how to make out charges for infractions of discipline, etc.

Upon the above, together with proficiency in recitation and in the field, soldierly bearing and regularity of attendance, the appointment of cadet officers and recommendations to His Excellency the Governor for commissions will be based.

In conclusion, I would respectfully urge that the battalion be placed upon the footing of other portions of the National Guard in allowances for armories, care of arms, etc.; and, furthermore, that a suitable armory be built, with a water-proof lower story, not floored, for artillery.

Very respectfully, your obedient servant,

G. G. GREENOUGH,
First Lieutenant, Fourth U. S. Artillery, Professor Military Science and Tactics

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REPORT

OF THE

ATTORNEY-GENERAL

FOR

THE YEARS 1876 AND 1877.

REPORT.

ATTORNEY-GENERAL'S OFFICE,
SACRAMENTO, August 1st, 1877. }

To His Excellency,

WM. IRWIN,

Governor of California:

SIR: In compliance with the laws regulating the duties of this office, I herewith submit, for the consideration of your Excellency, the Biennial Report of the proceedings of this department, together with such suggestions as seem proper.

The abstract from my official docket, hereto appended as part of this my official report, contains a more concise and intelligible statement of various suits to which the State has been, or is now, a party, than the same could be given in any other form, giving, as it does, the proceedings and present status of each suit. From this abstract it will appear that the business in this office has increased with the growth and increase of the population and business of the State. I take pleasure in saying that the criminal calendar shows a decrease in crime, more particularly in crimes of higher grade, showing that our people are advancing towards that higher civilization, the result of good government and superior intelligence. When we regard the fact that in other and older States and communities of our country, where society is less conglomerate than with us, recent outbreaks have defied and in many instances over-ridden the laws of the land, it is a matter of pride that with us, with a mixed population and with many more irritating causes of excitement and lawlessness, our State has, by the firmness of its law-abiding citizens, kept down and controlled the disorderly and law-breaking element so completely and satisfactorily as to be a matter of pride to us all.

The influx of a large immigrant population, many of them coming without means, and all without any knowledge of the usual avenues to employment, crowding upon us at a time when, from the dry season, the harvests are light and the water supply in the mines exhausted, coupled with the decline in stocks, the depression in values from the stringency of the times, has had its influence on the laboring classes. The want of employment has caused not only dissatisfaction and disappointment, but more or less of suffering. Yet, notwithstanding all this, the good order and quiet which has generally prevailed is peculiarly gratifying.

I have, as required, given many written opinions to the various State and county officers, as well as many written opinions to persons

desiring information, not strictly official. Copies of official correspondence are filed in this office, subject to the call of your Excellency or the Legislature.

TAXATION AND EQUALIZATION.

No question is more interesting to all the people than that of taxation and equalizing the burdens to be borne by all in the support of the government. While our Constitution declares that taxation shall be equal and uniform throughout the State, yet we know that exact, or even anything near exact, equality is difficult, if not impossible, without amendment to our present Constitution.

Our State Constitution, framed when we were a new society and had a small population, has, up to the present time, admirably answered the hopes of its framers, but it is believed by many of our wisest and best thinkers that we have outgrown the original instrument; that new questions, new interests, new relations, and our new and rapid growth, require a new Constitution. As the general election, at which this proposition will be voted upon, will take place prior to your Excellency's next message, your Excellency will have no opportunity to recommend action to the people or their representatives on this matter. It is, however, to be hoped that the popular vote will favor a call for a convention to amend our Constitution. It is particularly desirable in this, that the difficulty of equalizing the burdens of taxation, as our Constitution now stands, may be remedied by the wisdom of those whose duty it may be to make the needful amendments. It is also desirable that corporations, which, since the adoption of our present Constitution, have become a power, not in existence nor even contemplated at the framing of our present Constitution, should, by proper guards and restrictions be confined to their proper and legitimate powers, and safeguards thrown around them.

REGISTRATION.

The Registry Acts which, from time to time, have been passed by the Legislature, were thought by many to fitly and aptly protect the ballot from abuse in the hands of the people. The various amendments to the registry law, and the wholesome provisions of the Codes, have done much, but experience has shown that our registry law and its workings are by no means perfect. The wisdom of our Legislature, I hope, will be able to suggest still further needed checks to abuses under our present laws. I hope your message to the next Legislature will call attention to this question, and that the needed legislation may be had.

CHINESE POPULATION.

Every one familiar with the proceedings in our courts is aware of the fact that the Chinese population, as a class, are not only a useless and vicious part of our population, but they are a costly and expensive part also. Paying, as they do, little of the taxes to support our burdens, they crowd our jails and houses of correction with their criminals. The experience we have had with these people for more than a quarter of a century teaches that, while they are with us, they can never be of us in the true sense of citizenship. Our courts

are powerless to control their actions. The heads of the six companies have their peculiar manner of conducting business within themselves, and we know in much, if not in most, of their business places it is out of the power of our courts to administer the laws of the land toward them. They have introduced, and conduct under our eyes, a system of slavery more degrading than any ever before known, and we are powerless to control it. They have brought pollution to our doors, and we are not able to prevent it. Every year the evil is becoming more and more distressing to our people, and we earnestly hope it may be remedied. As a State we are powerless, and must look to and invoke federal action. One finds in the Eastern States more harmony—some know nothing of an evil like this. If they did know it, as we do, there would be but one feeling upon the subject. A Commission coming amongst us for a few days, for the purpose of taking testimony, can get little or no idea of its true character. I hope, in your message to the Legislature, you will call upon them to memorialize Congress upon the subject. A repeal of the so-called Burlingame Treaty would do much, but even this will not go as far as the remedy we want. I hope much from the intelligent action of our next Congress on this subject.

EXPENDITURES.

The expenditures of this office have been kept within the appropriation. They have been as follows:

For the twenty-seventh fiscal year:	
Postage and contingent expenses.....	\$75 00
Traveling expenses.....	95 00
For costs and expenses of suit to which the State was a party in interest.....	2,775 00
For pay of Porter.....	200 00
For the twenty-eighth fiscal year:	
Postage and contingent expenses.....	100 00
For traveling expenses.....	430 00
For costs and expenses of suits to which the State was a party in interest.....	3,302 50
For pay of Porter.....	100 00

I suggest that the appropriation for the support of this department be continued for the next two years without change, as I believe that the office can be conducted within the present amount of appropriation.

I am, very respectfully, your obedient servant,

JO HAMILTON,
Attorney-General.

COPY OF ATTORNEY-GENERAL'S DOCKET,

For the years eighteen hundred and seventy-six and eighteen hundred and seventy-seven.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause—Civil or Criminal -----	Mode of Prosecution, and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
The People, etc., Respondents, vs. Thomas Mora, Appellant.	Municipal Criminal Court, City and County of San Francisco.	Criminal action.	By Indictment—Forgery.	Dec. 14th, 1874—Indictment filed. Feb. 24, 1875—Verdict, guilty. March 20—Sentence, State Prison ten years. May 6—Appeal taken.	May 25, 1875—Transcript filed. Oct. 7, 1875—Judgment affirmed. Oct. 30—Rehearing granted. After rehearing, Jan. 11, 1876—Judgment affirmed.	Remittitur issued Feb. 15, 1876.	
The People, etc., ex rel. John L. Love, Attorney-General, plaintiff and Appellant, vs. J. E. Goux, Administrator of the Estate of August Leopold Mozart, deceased, defendant and Respondent.	Santa Barbara County, District Court of the First Judicial District.	Civil action.	By Complaint to reduce to possession of the State the escheated property of estate of deceased intestate, dying without heirs. Amount of judgment prayed for, \$3,329 14.	Amended Complaint filed April, 1876. Answer filed April 24, 1876. April 26, 1876—Judgment for plaintiff for the sum of \$1,768 14 in U. S. gold coin. Motion for new trial made by plaintiff, June 19, 1876. Motion denied—plaintiff appeals. Notice of appeal filed June 21, 1876.	July 31, 1876—Transcript on appeal filed. Feb. 8, 1877—Judgment and order affirmed.	Remittitur forthwith.	

The People, etc., Respondents, vs. Wm. Cloonan, Appellant.	Municipal Criminal Court, City and County of San Francisco.	Criminal action.	By Indict- ment—Bur- glary.	April 12, 1875—Indictment filed. May 28—Verdict, guilty. July 17, 1875—Sentence, State Prison five years. Aug. 10, 1875—Appeal taken.	Sep. 25, 1875—Transcript filed. Appellant's brief filed Nov. 16, 1875. Respondent's brief filed Dec. 11, 1875. Judgment and order af- firmed.	Remittitur is- sued Dec. 29, 1875.
The People, etc., Respondents, vs. H. H. Granice, Appellant.	Fresno County, Thirtieth District Court.	Criminal action.	By Indict- ment—Mur- der.	Jan. 7, 1875—Indictment filed. July 10—Verdict, guilty of murder in first degree, pun- ishment imprisonment for life. Oct. 22—Judgment, rendered. Oct. 28—Appeal taken.	Nov. 2, 1875—Transcript filed. Nov. 16, 1875—Argued orally and submitted. Dec. 7—Judgment reversed and cause remanded for a new trial. Remittitur forthwith.	Remittitur is- sued Dec. 9, 1875.
The People, etc., Respondents, vs. Chas. Lyons, Appellant.	Tulare County, Thirtieth District Court.	Criminal action.	By Indict- ment—Mur- der.	June 9, 1875—Indictment filed. Sept. 30—Verdict, manslaughter. Oct. 2—Sen- tence, State Prison six years. Oct. 2—Appeal taken.	Nov. 1, 1875—Transcript filed. Nov. 22—Appellant's brief filed. Dec. 9, 1875—Re- spondent's brief filed. Dec. 29, 1875—Judgment af- firmed.	Remittitur is- sued Dec. 9, 1875.
The People of the State of Califor- nia, vs. Plaintiff, The Central Pacific R. R. Co.	Third District Court, City and County of San Francis- co.	Civil ac- tion.	By Complaint —An action to set aside State patent to certain lands in Mis- sion Bay, S. Francisco.			
The People, etc., Respondents, John Sansome and Frank Baker, Appellants.	County Court, Plumas Coun- ty.	Criminal action.	By Indict- ment—Bur- glary.	Sept. 8, 1875—Indictment filed. Sep. 30, 1875—Verdict, guilty. Oct. 2, 1875—Sen- tence, State Prison fifteen years, Baker five years. Oct. 2, 1875—Appeal taken.	Oct. 11, 1875—Transcript filed. Jan. 11, 1876—Judgment and order affirmed.	Remittitur is- sued Dec. 29, 1875.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
The People, etc., Respondents, vs. Chas. Kinsey et al., Appellants.	Twelfth District Court, City and County of San Francisco.	Criminal action.	By Indictment—Murder.	Dec. 19, 1873 — Indictment filed. May 25, 1875 — Verdict, manslaughter. Sept. 6, 1875 — Sentence, State Prison, two years. Sept. 6, 1875—Appeal taken.	Oct. 19 1875—Transcript filed. Feb. 24, 1876—Judgment and order reversed, and cause remanded for new trial.	Remittitur issued Feb. 5, 1876.	
The People, etc., Respondents, vs. Loredo Gonzales, Appellant.	County Court, San Bernardino County.	Criminal action.	By Indictment—Assault to Murder.	June 1, 1875 — Indictment filed. Aug. 9, 1875—Verdict, guilty of an assault with a deadly weapon. Aug. 13 — Sentence, State Prison, one year. Aug. 16—Appeal taken.	Nov. 2, 1875—Transcript filed. Feb. 11, 1876 — Judgment and order affirmed.	Remittitur issued Feb. 5, 1876.	
The People, etc., Respondents, vs. John McDonald, Appellant.	Seventeenth District Court, Los Angeles County.	Criminal action.	By Indictment—Murder.	Oct. 22, 1874 — Indictment filed. Dec. 2, 1874—Verdict, murder in second degree; sentence, imprisonment for life. Dec. 5, 1874 — Judgment rendered. Jan. 23, 1875 — Appeal taken.	Dec. 4, 1875—Transcript filed, April 10, 1876—Judgment and order reversed, and cause remanded for a new trial.	Remittitur issued May 6, 1876.	

In the matter of the petition of the Market Street Railway, of San Francisco, to use the name of The People in certain actions or pro- ceedings.				Dec. 20, 1875 — Petition of Market Street Railway filed, and leave granted McAlister & Berghu, attor- neys for petitioner, to sue in the name of The People.		
The People, etc., Respondents, vs. Wang Ito, Appellant.	County Court, Alameda County.	Criminal action.	By Indict- ment—Bur- glary.	Sept. 22, 1875 — Indictment filed. Oct. 4—Verdict, guilty. Oct. 16—Sentence, State Prison, two years and six months. Nov. 22—Ap- peal taken.	Dec. 20, 1875—Transcript filed. Feb. 5, 1876—Order denying new trial affirmed.	Remittitur is- sued Feb. 5, 1876.
The People, etc., Respondents, vs. Charles Hudson, Appellant.	Municipal Criminal Court, City and County of San Fran- cisco.	Criminal action.	By Indict- ment—Rob- bery.	Aug. 16, 1875 — Indictment filed. Nov. 27 — Verdict, guilty. Dec. 11—Sentence, State Prison, ten years. Dec. 23—Appeal taken.	Dec. 28, 1875—Transcript filed. Jan. 13, 1876—Judg- ment and order affirmed.	Remittitur is- sued March 24, 1876.
The People, etc., Respondents, vs. Ramon Arros, Appellant.	Sixteenth Dis- trict Court, Kern County.	Criminal action.	By Indict- ment—Mur- der.	Nov. 11, 1870 — Indictment filed. Nov. 27, 1875—Ver- dict, guilty of murder in first degree; punishment, State Prison, for life. Dec. 2—Judgment rendered. Dec. 18—Appeal taken.	Dec. 31, 1875—Transcript filed. Oct. 3 — Judgment and order affirmed.	Remittitur is- sued Oct. 4, 1876.
The People, etc., Respondents, vs. Jas. B. Murphy, Appellant.	County Court, San Joaquin County.	Criminal action.	By Indict- ment—Bur- glary.	May 7, 1875 — Indictment filed. July 20—Verdict, guilty. Aug. 14—Sentence, State Prison, three years. Oct. 13—Appeal taken.	Jan. 4, 1876—Transcript filed. April 10—On motion of ap- pellant, appeal dismissed.	Remittitur is- sued April 20, 1876.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
The People, etc., Respondents, vs. Jas. B. Murphy, Appellant.	County Court, San Joaquin County.	Criminal action.	By Indictment—Embezzlement.	March 19, 1875—Indictment filed. July 21 — Verdict, guilty; sentence, one year in State Prison. Oct. 13—Appeal taken.	Jan. 4, 1876—Transcript filed. July 20, 1876 — Judgment and order reversed, and cause remanded for new trial.	Remittitur issued Aug. 15, 1876.	
The People of the State of California ex rel. R. H. Orton, Plaintiffs, vs. Chas. W. O'Neil, Defendant.	Justice's Court, City and County of San Francisco.	Civil action.	By complaint —An action to recover certain fines imposed on defendant as a member of Co. D, 1st Infantry Regiment, 2d Brigade, N. G.C., for certain derelictions of duty.	Petition of relator to sue in the name of The People filed January 24, 1876, and the same day leave granted. E. J. Smith, attorney for relator.			

The People of the State of California ex rel. R. H. Orton, Plaintiffs, vs. F. N. Downey, Defendant.	Justice's Court, City and County of San Francisco.	Civil action.	Same as above.	Petition of relator to sue in the name of The People filed January 24, 1876, and leave granted. E. J. Smith, attorney for relator.		
The People of the State of California ex rel. R. H. Orton, Plaintiffs, vs. John T. Harnes, Defendant.	Justice's Court, City and County of San Francisco.	Civil action.	Same as above.	Petition of relator to sue in the name of The People filed January 24, 1876, and leave granted. E. J. Smith, attorney for relator.		
The People of the State of California ex rel. Board of Supervisors of Yolo County, vs. Adam Lee, Edward Lee, Marion Lee and Theodore Lee, Defendants.	Yolo County, Sixth District Court.	Civil action.	By complaint —An action to restrain defendants from exercising corporate privileges and from usurping a franchise.	Petition for leave to sue in the name of The People filed, and leave granted, February 18, 1876.		
The People of the State of California ex rel. M. A. Nourse, Plaintiff, vs. — Friel, Defendant.	Yolo County, Sixth District Court.	Civil action.	By complaint —To try the right to the office of Surveyor of Yolo County.	Petition for leave to sue in name of The People filed March 15, 1876, and leave granted the same day. Lambert & DeWitt, attorneys for plaintiff.		

COPY OF THE ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause—Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court	Memorandum of Process Issued--	Remarks.
The People of the State of California ex rel. Geo. A. Nourse, Plaintiff, vs. Henry Casey, A. H. Rose and D. W. Gillett.	City and County of San Francisco, Nineteenth District Court.	Civil action.	By complaint—An action to annul a patent issued to the defendants for the E. & of Sec. 36, T. 7 N., R. 10 E., Mt. Diablo.	Petition to sue in the name of The People filed March 16, 1876, and leave granted. Geo. A. Nourse, attorney for plaintiff.			
The People of the State of California ex rel. W. H. Webb, vs. County seat of Monterey County.	Monterey County.	Civil action.		Petition to sue in the name of The People filed March 4, 1876. Respondent's answer to petition filed March 7, 1876. March 15th, after due consideration, prayer of petition denied.			

The People of the State of California ex rel. V. B. Russell, Plaintiff, vs. M. H. Bailhache, Defendant.	Contra Costa County, Fifteenth District Court.	Civil action.	By complaint—To try the right to the office of County Auditor of Contra Costa County.	Petition to sue in the name of The People, etc., filed March 7, 1876. Leave granted March 18, 1876. L. B. Mizner, attorney for plaintiff.		
The People, etc., Respondents, vs. H. Shainwald, Appellant.	County Court, Napa County.	Criminal action.	By Indictment—Arrest, second degree.	June 25, 1875—Indictment filed. Dec. 17—Verdict, guilty. Dec. 27—Sentence, State Prison four years. Dec. 27—Appeal taken.	Jan. 25, 1876—Transcript filed. July 17, 1876—Judgment and order denying new trial affirmed.	Remittitur issued Aug. 29, 1876.
The People, etc., Respondents, vs. Charles Fisher, Appellant.	San Joaquin County Court.	Criminal action.	By Indictment—Arrest.	Jan. 13, 1876—Indictment filed. Feb. 3—Verdict, guilty. Feb. 11—Sentence, State Prison one year. Feb. 11—Appeal taken.	Feb. 26, 1876—Transcript filed. April 28, 1876—Judgment and order reversed, and cause remanded for a new trial.	Remittitur forthwith.
Ex parte, Ah Ping, on habeas corpus.	Original proceedings in Supreme Court of the State of California.		By petition for writ of habeas corpus.	March 29, 1876—Petition, affidavits, etc., for writ of habeas corpus filed.	March 29, 1876—Alternative writ issued. April Term, 1876—At the hearing of the writ herein, ordered that the writ be discharged and the petitioner remanded to the custody of the Warden of the State Prison.	

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
Ex parte, H. H. Granite, on habeas corpus.	Original proceedings in Supreme Court of the State of California.		By petition for writ of habeas corpus.	March 23, 1876.—Petition, etc., filed, and writ issued returnable before the Supreme Court on the first day of the April Term. This proceeding was to inquire into the validity of an order discharging the jury and remanding the prisoner to the custody of the Sheriff to await any indictment that might be found against him for murder. The indictment under which he was then being tried was for manslaughter, and the proofs established a higher offense than charged. At the hearing thereof, the writ was discharged, and the prisoner remanded to the custody of the Sheriff of Fresno County.			In this case the indictment was intended to charge the defendant with murder, but was, in fact, when filed, an indictment for man slaughter. It was so altered after filing, and before trial, as to charge the defendant with murder, and upon motion of the defendant, and proof made, the alterations were stricken out and left it as it stood when presented by the Grand Jury.

The People, etc., Respondents, vs. Ah Sing, et al., Appellant.	San Luis Obispo County— First District Court.	Criminal action.	By indictment—Murder.	Aug. 27, 1875—Indictment filed. Jan. 22, 1876—Verdict, guilty of murder in the first degree, and fix punishment, imprisonment for life. Jan. 26—Judgment rendered. Jan. 28, 1876—Appeal taken.	March 27, 1876—Transcript filed. July 17—Judgment reversed, and cause remanded for new trial.	Remittitur issued Aug. 12, 1876.
The People, etc., Respondents, vs. W. P. Bullard, Appellant.	Tulare County, County Court.	Criminal action.	By indictment—Assault with intent to commit murder.	Sept. 7, 1875—Indictment filed. Dec. 14—Verdict, guilty as charged in the indictment. Dec. 31—Sentence, two years in State Prison. Feb. 2, 1876—Appeal taken.	April 5, 1876—Transcript filed. Dec. 21, 1876—Judgment, and ordered reversed and cause remanded for new trial.	Remittitur issued Jan. 16, 1877.
The People, etc., Respondents, vs. Theodore Kane, Appellant.	Sacramento County, County Court.	Criminal action.	By indictment—Ex-fortion.	Nov. 25, 1874—Indictment filed. Dec. 4, 1875—Verdict, guilty as charged in the indictment. Dec. 11—Sentence, thirty days in State Prison. Dec. 11—Appeal taken.	April 8, 1876—Transcript filed. July 11, 1876—Judgment affirmed.	Remittitur issued Aug. 7, 1876.
The People, etc., Respondents, vs. Yu Jay, Ah Kee and Ah Lung, Appellants.	Sacramento County, County Court.	Criminal action.	By indictment—Robbery.	Aug. 14, 1875—Indictment filed. March 3, 1876—Verdict, guilty. March 12—Sentence, two years State Prison, each. March 14—Appeal taken.	April 25, 1876—Transcript filed. July 11, 1876—Judgment and order affirmed.	Remittitur issued forthwith.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court -----	Memorandum of Process Issued -----	Remarks.
The People, etc., Respondents, vs. J. R. Holt, Appellant.	Los Angeles County, County Court.	Criminal action.	By indictment—Robbery.	March 8, 1876—Indictment filed. March 20—Verdict, guilty. March 27—Sentence, State Prison seven years. March 27—Appeal taken.	April 27, 1876—Transcript filed. Aug. 11, 1877—Judgment and order affirmed. Petition for rehearing filed Oct. 6. Rehearing denied.	Remittitur issued Oct. 7, 1876.	
The People, etc., Respondents, vs. Silvestre Ordoña and Francisco Gutierrez et al, Appellants.	Los Angeles County, County Court.	Criminal action.	By indictment—Rape.	Jan. 8, 1876—Indictment filed. March 14—Verdict, guilty. March 25—Sentence, five years in the State Prison. March 27—Appeal taken.	April 27, 1876—Transcript filed. August 14—Judgment and order reversed, and cause remanded for new trial.	Remittitur issued Sept. 9, 1876.	
The People of the State of California, ex rel. A. B. Sanford, vs. The Board of Supervisors of the City and County of San Francisco, Defendants.	City and County of San Francisco.	Civil action.	By writ of mandate to compel defendants to appoint an Inspector of Boilers, etc.	May 22, 1876—Petition to sue in the name of The People, etc., filed, and leave granted. Du Brutz & Dickenson, attorneys for relator.			

<p>The People of the State of California, ex. rel. John W. Foard, Insurance Commissioner,</p> <p>vs.</p> <p>The Trust Fund Insurance Association.</p>	<p>City and County of San Francisco.</p>			<p>Petition to sue in the name of The People, etc., filed the 26th day of May, 1876, and authority issued to J. W. Foard, Insurance Commissioner.</p>		
<p>The People of the State of California, ex. rel. Andrew J. Bryant, Mayor of the City of San Francisco,</p> <p>vs.</p> <p>John Nightingale.</p>	<p>City and County of San Francisco.</p>			<p>Complaint signed and authority to sue in the name of The People given to petitioner and W. C. Burnett, his attorney, this 27th day of May, 1876.</p>		
<p>The People of the State of California, Respondents,</p> <p>vs.</p> <p>Ellery Green, Appellant.</p>	<p>Kern County, County Court.</p>	<p>Criminal action.</p>	<p>By indictment—Larceny.</p>	<p>Feb. 1, 1876—Indictment filed. Feb. 14—Verdict, guilty. April 28—Sentence, State Prison one year. April 28—Appeal taken.</p>	<p>May 12, 1876—Transcript filed. April 10, 1877—Judgment reversed and cause remanded for a new trial.</p>	<p>Remittitur issued May 7, 1877.</p>
<p>The People, etc., Respondents,</p> <p>vs.</p> <p>Minor Walden, Appellant.</p>	<p>Stanislaus Co., County Court.</p>	<p>Criminal action.</p>	<p>By indictment—Felonies—tanning with election returns.</p>	<p>Jan. 26, 1876—Indictment filed. Feb. 26—Verdict, guilty. March 31—Sentence, five years in State Prison. March 31—Appeal taken.</p>	<p>May 18, 1876—Transcript filed. Jan. 24, 1877—Judgment and order reversed, and cause remanded for a new trial.</p>	<p>Remittitur issued Feb. 8, 1877.</p>

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District and Court instituted, tried, and adjudged	Character of Cause, Civil or Criminal	Mode of Prosecution, and nature of Demand or Crime	Stage of Proceedings in Court below	Memorandum of Judgment in Supreme Court	Memorandum of Process Issued	Remarks.
The People, etc., Appellants, vs. C. A. Lander.	San Bernardino, Eighteenth District Court.	Criminal action.	Indictment— Misdemeanor.	The defendant was convicted of a misdemeanor before the County Court. A writ of certiorari was issued out of the Eighteenth District Court, and upon the hearing thereof the judgment of the County Court was annulled Dec. 13, 1875. From the order entered by the District Court the District Attorney appealed April 17, 1876.	May 22, 1876—Transcript filed.	Remittitur issued Aug. 7, 1876.	This case was dismissed upon motion of the Attorney-General, for want of jurisdiction in the Supreme Court.
The People, etc., Respondents, vs. Eli Keeney, Appellant.	Shasta County, County Court.	Criminal.	Indictment— Assault with intent to kill.	Oct. 15, 1875—Indictment filed. May 11, 1876—Verdict, guilty of an assault with a deadly weapon, with intent to do great bodily harm. May 15—Sentence, two years in State Prison. June 3, 1876—Appealed taken.	June 10, 1876—Transcript filed August 11, 1876. Judgment affirmed.	Remittitur issued Sept. 9, 1876.	

The People, etc., Respondents, vs. Henry Mills, Appellant.	Tehama County, County Court.	Criminal.	Indictment— Grand larceny.	May 4, 1876—Indictment filed. May 23—Verdict, guilty. May 31—Sentence, eighteen months in State Prison. May 31—Appeal taken.	June 24, 1876—Transcript filed. October 11, 1876—Judgment and order reversed and cause remanded for new trial.	Remittitur issued October 12, 1876.
The People, etc., Respondents, vs. Vincent B. Swiney, Appellant.	Tehama County, County Court.	Criminal.	Indictment— Grand larceny.	May 4, 1876—Indictment filed. May 23—Verdict, guilty. May 31—Sentence, eighteen months in State Prison. May 31—Appeal taken.	June 24, 1876—Transcript filed. October 11, 1876—Judgment and order reversed, and cause remanded for new trial.	Remittitur issued October 12, 1876.
The People, etc., Respondents, vs. John C. Patterson, Appellant.	San Francisco County, Municipal Criminal Court.	Criminal.	Indictment— Attempt to commit burglary.	March 4, 1876—Indictment filed. April 21—Verdict, guilty. May 13—Sentence, four years in State Prison. June 27—Appeal taken.	June 27, 1876—Transcript filed. July 27—Judgment and order affirmed.	Remittitur issued August 12, 1876.
The People, etc., Respondents, vs. Wm. J. Taylor, Appellant.	City and County of San Francisco, Fourth District Court.	Criminal action.	Indictment— Murder.	November 29, 1875—Indictment filed. March 3, 1876—Verdict, guilty of murder in the second degree. March 25—Sentence, ten years in the State Prison. March 27—Appeal taken.	June 28, 1876—Transcript filed. August 11—Judgment and order affirmed.	Remittitur issued September 9, 1876.
The People, etc., Respondents, vs. Wm. Renfro, Appellant.	San Joaquin County, County Court.	Criminal.	Indictment— Assault with intent to commit rape.	May 27, 1876—Indictment filed. June 15—Verdict, guilty. June 17—Sentence, ten years in the State Prison. June 19, 1876—Appeal taken.	June 29, 1876—Transcript filed. July 11, 1876—Judgment and order affirmed.	Remittitur issued August 7, 1876.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District and Court instituted, tried and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
The People of the State of California ex rel. John Hamilton, Attorney-General, Plaintiffs, vs. Nathan Combs et al., Defendants.	Napa County, Seventh District Court.	Civil action.	By complaint —An action to condemn certain lands, water sheds and water rights for the use of the State Insane Asylum at Napa City.	July 27, 1876—Authority issued to F. E. Johnston to use the name of The People, etc. September 20—Complaint filed. October 25—Judgment rendered condemning certain lands and water privileges for the use of the State Insane Asylum at Napa City, and awarding to the several defendants compensation for the same.			
The People of the State of California, Plaintiffs, vs. John W. Parsons and certain property, and all persons claiming the same, Defendants.	Santa Cruz County, Twentieth District Court.	Civil action.	By complaint —To reduce to the possession of the State the escheated property of George Parsons, deceased, dying without heirs.	July 28, 1876—C. B. Younger authorized to proceed under Section 474 of Political Code, and to reduce the property of this estate to the possession of the State.			

The People of the State of California ex rel. Jo Hamilton, Attorney-General, vs. P. W. Randall, M. G. Kellogg, R. Perrin, D. C. Moore et al., Defendants.	City and County of San Francisco, Fourth District Court.	Civil action.	By complaint. —To enjoin the defendants from acting as a Board of Medical Examiners and issuing certificates and diplomas.	September 11, 1876—Complaint signed by Attorney-General and authority issued to Haight & Taylor to use the name of The People and of the Attorney-General herein.	
The People of the State of California ex rel. Jo Hamilton, Attorney-General, vs. San Francisco and Point Lobos Road Company.	City and County of San Francisco.	Civil action.	By complaint. —To restrain the defendant from collecting tolls, and from exercising corporate powers.	Sept. 11, 1876—Petition to sue in the name of The People filed, and permit issued to John Mackey and Frederick Hall.	
The People of the State of California ex rel. Wm. Neely Johnson, vs. D. B. Wilson, his assigns, and grantees.	Los Angeles County, Seventeenth District Court.	Civil action.	By complaint. —An action to annul State patent to certain lands.	Sept. 16, 1876—Petition to sue in the name of The People filed, and leave granted.	

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged	Character of Cause—Civil or Criminal	Mode of Prosecution and Nature of Demand or Crime	Stage of Proceedings in Court below	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
The People of the State of California ex rel. Wm. Neely Johnson, vs. F. P. Temple, his assigns, or grantees.	Los Angeles County, Seventeenth District Court.	Civil action.	By complaint.—To set aside and annul State patent to certain lands.	Sept. 16, 1876.—Petition to sue in the name of The People filed, and leave granted.			
The People of the State of California ex rel. Jo Hamilton, Attorney-General, vs. Thos. Baker et al.	City and County of San Francisco, Fifteenth District Court.	Civil action.	By complaint.—To set aside and annul whatever evidence of title may be outstanding to certain lands in the complaint described, and to decree said lands subject to sale, etc.	Copy of complaint filed in the office, and leave granted to J. C. Zabriskie to use the name of The People, Sept.—, 1876.			

The People, etc., Respondents, vs. Chin Monk Son.	City and County of San Francisco, Fifthteenth District Court.	Criminal.	By indictment — Murder.	June 7, 1876 — Indictment filed. April 6 — Verdict, guilty of murder in the first degree. Judgment rendered. May 26 — Sentenced to be hanged by the neck till he be dead. Appeal taken.	Feb. 12, 1877 — Judgment and order affirmed, with directions for the Court below to fix the day to carry the sentence into execution.	Remittitur issued March 12, 1877.	Defendant executed May 4, 1877.
The People, etc., Respondents, vs. Herrulean Seal.	Santa Clara County Court.	Criminal.	By indictment — Assault, with intent to commit robbery.	May 18, 1876 — Indictment filed. June 3 — Verdict, guilty. July 18 — Appeal taken.	July 27, 1876 — Transcript filed. Jan. 8, 1877 — Judgment and order affirmed.	Remittitur issued Feb. 5, 1877.	The record in this case contains no minute of the Judgment.
The People, etc., Respondents, vs. Ah Gee, Appellant.	County of Los Angeles, County Court.	Criminal.	By indictment — Grand larceny.	June 22, 1876 — Indictment filed. July 13 — Verdict, guilty. July 21, 1876 — Appeal taken.	July 31, 1876 — Transcript filed. Oct. 11 — Judgment and order reversed, with directions to arrest judgment and sustain the demurrer to the indictment.	Remittitur issued Nov. 6, 1876.	The record in this case contains no minute of the Judgment.
The People, etc., Respondents, vs. Ah Hec, Appellant.	Tulare County, County Court.	Criminal.	By indictment — assault to murder.	June 7, 1876 — Indictment filed. June 19 — Verdict, guilty. June 24 — Sentence, one year in the State Prison. June 26 — Appeal taken.	July 31, 1876 — Transcript filed. Oct. 11 — Judgment and order affirmed.	Remittitur issued Nov. 6, 1876.	
The People, etc., Respondents, vs. J. T. Blunt, Appellant.	Tulare County, County Court.	Criminal.	By indictment — assault to murder.	March 9, 1876 — Indictment filed. June 14 — Verdict, guilty. June 19 — Sentence, three years in the State Prison. June 19 — Appeal taken.	July 31, 1876 — Transcript filed. Oct. 11 — Judgment and order affirmed.	Remittitur issued Nov. 6, 1876.	

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged	Character of Cause—Civil or Criminal	Mode of Prosecution and Nature of Demand or Crime	Stage of Proceedings in Court below	Memorandum of Judgment in Supreme Court.	Remarks.
The People, etc., Respondents, vs. M. H. Atherton, Appellant.	Santa Cruz Co., Twentieth District Court.	Criminal.	By Indictment—Murder.	Nov. 5, 1875—Indictment filed. June 17, 1876—Verdict, murder in the first degree, leaving the penalty to the Court. Sentenced to be hanged by the neck till he be dead. Aug. 2—Appeal taken.	Aug. 14, 1876—Transcript filed. Nov. 13, 1876—Judgment and order reversed, and cause remanded for a new trial.	Memorandum of Process Issued— Remittitur issued Dec. 6, 1876.
The People of the State of California ex rel. J. C. Tyler et al. vs. Tehama County—Board of Supervisors of Tehama County and the California Bridge Building Company.	Tehama County, Second District Court.	Civil action.	By Complaint—An action to set aside certain acts and things done by the Board of Supervisors relative to the construction of a bridge, and that they be restrained from issuing warrants to pay for the same, etc.	Petition to sue in the name of The People, with copy of Complaint annexed, filed Oct. 4, 1876, and leave granted. J. C. Chadbourn, attorney for plaintiffs.		

The People of the State of California ex rel. L. L. Robinson vs. The Pittsburg Railroad Company.	Contra Costa County.	Civil action.	Oct. 19, 1876.—Petition for leave to sue in the name of The People filed and leave granted. E. L. Gould, attorney for relator.		
The People of the State of California ex rel. Michael Kerns vs. Rebecca Blankenship, Wm. Blankenship, and Zacharia Blankenship and their assigns.		Civil action.	By Complaint.—An action to set aside a State patent to certain lands in the Complaint described. Oct. 30, 1876.—Petition to use the name of The People, etc., filed and leave granted. Atwell & Bradley, attorneys for relator.		
The People of the State of California ex rel. Attorney-General John L. Love vs. E. Jacobs, A. J. Atwell, The San Francisco Savings Union, J. M. Johnson, et al.	San Francisco Co., Twelfth District Court.	Civil action.	By Complaint.—An action to set aside State patent to certain lands. Copy of Complaint filed Nov. 23, 1876. Stewart, Grathouse and Haight, attorneys for plaintiff.		This action was commenced during my predecessor's term of office, but there being no record in the Docket it is entered here.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District and Court instituted, tried, and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued—	Remarks.
The People of the State of California ex rel. Attorney-General John L. Love vs. J. M. Johnson, Wm. Neely Johnson, H. Lacey, et al.	San Francisco Co., Twelfth District Court.	Civil action.	By Complaint—An action to set aside State patent to certain lands.	Copy of Complaint filed Nov. 23, 1876. Stewart, Great-house and Haight, attorneys for plaintiff.			This action was commenced during my predecessor's term of office, but there being no record in the Docket it is entered here.
The People of the State of California ex rel. Attorney-General John L. Love vs. J. M. Johnson, H. Lacey, Wm. Neely Johnson, et al.	San Francisco Co., Twelfth District Court.	Civil action.	By Complaint—An action to set aside State patent to certain lands.	Copy of Complaint filed Nov. 23, 1876. Stewart, Great-house and Haight, attorneys for plaintiff.			Same as above.
The People of the State of California ex rel. John L. Love, Attorney-General, vs. Wm. Harland et al.	San Francisco Co., Twelfth District Court.	Civil action.	By Complaint—An action to annul and set aside State patent to certain lands.	Copy of Complaint filed Nov. 23, 1876. Stewart, Great-house and Haight, attorneys for plaintiff.			Same as above.

<p>The People of the State of California ex rel. A. J. Bryant</p> <p>vs.</p> <p>The Mission and Ocean Beach Macadamized Road Company.</p>	<p>San Francisco Co., Twelfth District Court.</p>	<p>Civil action.</p>	<p>By Complaint —To declare certain highways a public common highway and to restrain defendants from collecting toll on the same, etc.</p>	<p>Dec. 12, 1876—Petition filed and copy of Complaint, and leave granted to sue in the name of The People. W. C. Burnett attorney for relator.</p>	
<p>The People of the State of California ex rel. Wm. Mayesteis</p> <p>vs.</p> <p>John W. Taylor.</p>	<p>City and County of San Francisco.</p>	<p>Civil action.</p>	<p>By complaint —An action to restrain the defendant from exercising corporate privileges, and to enjoin the laying down of a railroad track, etc., on certain streets in San Francisco.</p>	<p>December 4, 1876—Petition to sue in the name of The People filed, and leave granted. Jos. Naphitaly, attorney for relator.</p>	

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District and Court instituted, tried and adjudged -----	Character of Cause —Civil or Criminal-----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued--	Remarks.
The People of the State of California by Jo Hamilton, Attorney-General, ex rel. The Company of Associated Stock Brokers, vs. The Real Estate Association, Charles Sutor and Wm. Hollis.	City and County of San Francisco, Fourth District Court.	Civil action.	By complaint —An action to remove an obstruction from the public highway, to wit: a street in the City of San Francisco, known as "Laura Place," the same being obstructed by a building erected by the defendants.	January 2, 1877—Copy of Complaint filed, and leave granted to sue in the name of The People. W. H. L. Barnes, attorney for relator.			
The People, etc., Respondents, vs. Frank Graham, Appellant.	County of San Joaquin, County Court.	Criminal action.	By indictment — Grand larceny.	September 26, 1876—Indictment filed. October 5—Verdict, guilty. October 10—Sentenced to five years in the State Prison. October 19—Appeal taken.	October 31, 1876—Transcript filed. April 30, 1877—Judgment and order affirmed.	Remittitur issued December 9, 1876.	

The People, etc., Respondents, vs. William Leith, Appellant.	Lassen County, Second Dis- trict Court.	Criminal action.	By indictment— Murder.	August 8, 1876—Indictment filed. October 11—Verdict, guilty of murder in the second degree. October 18 —Sentenced to twelve years in State Prison. Oc- tober 18—Appeal taken.	October 31, 1876—Transcript filed. February 17, 1877— Judgment and order re- versed, and cause remanded for new trial.	Remittitur is- sued April 7, 1877.
The People, etc., Respondents, Nathaniel Squires, Appellant.	Colusa County, Tenth Dis- trict Court.	Criminal action.	By indictment— Murder.	January 6, 1876—Indictment filed. May 10—Verdict, guilty of murder in the second degree. May 13— Sentenced to eighteen years in the State Prison. October 21, 1876—Appeal taken.	November 1, 1876—Transcript filed. January 8, 1877—Judgment and order affirmed.	Remittitur is- sued April 13, 1877.
The People, etc., Respondents, vs. Manuel Feliz, Appellant.	County of Tu- lare, County Court.	Criminal action.	By indictment— Grand lar- ceny.	September 7, 1876—Indict- ment filed. September 12 —Verdict, guilty. Sep- tember 16—Sentence, one year in the State Prison. September 16—Appeal taken.	November 2, 1876—Transcript filed. January —, 1877—Judgment reversed, and cause remanded for a new trial.	January 10— Remittitur issued.
The People, etc., Respondents, vs. Buck English and William Turner, Appellants.	Lake County, County Court.	Criminal action.	By indictment— Grand lar- ceny.	October 7, 1876—Indictment filed. October 17—Verdict, guilty. October 18—Sen- tence, one year and six months in State Prison. October 18—Appeal taken.	November 6, 1876—Transcript filed. April 30, 1877—Judgment reversed, and cause remanded for a new trial.	Remittitur is- sued May 26, 1877.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause—Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued --	Remarks.
The People, etc., Respondents, vs. William Smith, Appellant.	San Luis Obispo County, Court.	Criminal action.	By indictment—Assault with a deadly weapon, with intent to do great bodily harm.	August 27, 1876—Indictment filed. September 26—Verdict, guilty as charged in the indictment. September 28—Sentence, sixty days in County Jail and pay a fine of \$300, and in default of payment to be imprisoned until the fine be satisfied; such imprisonment not to exceed one hundred and fifty days. September 28, 1876—Appeal taken.	December 2, 1876—Transcript filed. January 9, 1877—Appeal dismissed for want of jurisdiction by the Supreme Court.	Remittitur issued February 5, 1877.	
The People, etc., Respondents, vs. Richard Murphy, Appellant.	Yolo County, Court.	Criminal action.	By indictment—Obtaining goods under false pretenses.	October 11, 1876—Indictment filed. October 31—Verdict, guilty. October 31—Sentence, one year in State Prison. November 6, 1876—Appeal taken.	December 6, 1876—Transcript filed. January 27, 1877—Judgment and order affirmed.	Remittitur issued February 27, 1877.	

The People, etc., Appellants, vs. Maw Clock, Respondent.	Los Angeles County, Court.	Criminal action.	By indictment—Per- jury.	November 13, 1876—Indict- ment filed. November 18 —Denurrer filed. Novem- ber 18—Denurrer sus- tained, and ordered the de- fendant be held to answer any indictment that might be found against him by the next Grand Jury. From the order sustaining the denurrer the District Attorney appealed. Ap- peal taken November 29, 1876.	December 18, 1876—Trans- cript filed. January 9, 1877—Judgment reversed, and cause remanded, with directions to overrule the denurrer.	Remittitur is- sued Janu- ary 16, 1877.
The People, etc., Respondents, vs. H. H. Granice, Appellant.	Merced Coun- ty, Thir- teenth Dis- trict Court.	Criminal.	By indictment—Mur- der.	Aug. 11, 1876—Indictment filed. Dec. 4—Verdict, guilty of murder in the sec- ond degree. Dec. 9—Sen- tence, thirty years in the State Prison. Dec. 12—Ap- peal taken.	Jan. 9, 1877—Judgment re- versed, and ordered that the prisoner be discharged from custody.	Remittitur is- sued Jan. 10, 1877.
The People of the State of Califor- nia ex rel. Jo Hamilton, Ator- ney-General, vs. Wm. Ford, Tax Col- lector of the City and County of San Francisco, State of Califor- nia.	Original pro- ceedings in Supreme Court.	Civil ac- tion.	Writ of man- date to com- pel the de- fendant to pay over cer- tain moneys by him col- lected as Tax Collector of the City and County of San Francis- co, for the years 1875-6.	Dec. 14, 1876—Authority to sue in the name of The People issued to W. C. Bur- nett. Jan. 6, 1877—Peti- tion filed. Jan. 8, 1877— Answer of respondent filed.	March 27—Ordered, that a peremptory writ of man- date issue as prayed for.	

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried and adjudged -----	Character of Cause—Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued	Remarks.
The People of the State of California ex rel. Jo Hamilton, Attorney-General, vs. The Board of Medical Examiners, appointed by the California Medical Association.	City and County of San Francisco, Fourth District Court.	Civil action.	By Petition and Writ of Prohibition. Proceedings to determine the legal status of the defendant.	Feb. 23, 1877—Authority to sue in the name of The People, etc., issued to Haight & Taylor, attorneys for plaintiff.			
The People of the State of California ex rel. Jas. Welch, Win. Gee, et al., vs. Reclamation District No. 203—A. Tenio, C. Schreiner, and F. Shailer, Trustees of said Reclamation District.	Sacramento County, Sixth District Court.	Civil action.	By Complaint—Proceedings to test the legality of the organization of said district, and the right of the defendants, Tenio, Schreiner, and Shailer, to act as such officers.	Feb. 25, 1877—Petition to sue in the name of The People filed, and leave granted A. C. Freeman and L. S. Taylor, attorneys for relators.			

The People, etc., Respondents, vs. Francisco Bolcoff, Appellant.	Monterey County Court.	Criminal.	By Indictment—Perjury.	April 19, 1876—Indictment filed, June 24—Verdict, guilty as charged in the indictment. July 1—Sentence, five years in the State Prison. Dec. 5, 1876—Appeal taken.	Jan. 8, 1877—Transcript filed, April 10, 1877—Judgment and order affirmed.	Petition for rehearing pending.
The People of the State of California by Jo Hamilton, Attorney-General, ex rel. A. J. Bryant, vs. Thomas H. Blythe, John Doe, Richard Roe, et al.	San Francisco.	Civil action.	By Complaint—An action to remove certain obstructions to Brooks St., San Francisco, and to declare the same a public street, and open up the same to public use.	March 5, 1877—Petition to sue in the name of The People filed, and leave granted. March 13—Copy. D. J. Murphy, attorney for relator.		
The People, etc., Respondents, vs. Charles A. Weaver, Appellant.	San Joaquin County Court.	Criminal.	Indictment—Assault with intent to commit rape.	Sept. 26, 1876—Indictment filed, Oct. 24—Verdict, guilty. Oct. 27—Sentence, ten years in the State Prison. Dec. 26—Appeal taken.	Jan. 10, 1877—Transcript filed, May 1—Judgment and order affirmed.	Petition for rehearing pending.
The People, etc., Respondents, vs. David De Vernier, Appellant.	City and County of San Francisco, Municipal Criminal Court of the City and County of San Francisco.	Criminal.	Indictment—Embezzlement.	Sept. 1, 1876—Indictment filed, Dec. 1—Verdict, guilty. Dec. 9—Sentence, four years in the State Prison. Dec. 16—Appeal taken.	Jan. 13, 1877—Transcript filed, May 1—Judgment and order affirmed.	May 1—Re-mittitur issued.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued...	Remarks.
The People, etc., Respondents, vs. John Benson, Appellant.	Santa Clara County Court.	Criminal.	Indictment — Arson.	May 18, 1876 — Indictment filed. Aug. 30 — Verdict, guilty. Sept. 2 — Sentence, ten years in the State Prison. Oct. 26 — Appeal taken.	Jan. 30, 1877 — Transcript filed.		Still pending.
The People, etc., Respondents, vs. L. B. English, Appellant.	Lake County Court.	Criminal.	Indictment — Grand larceny.	Oct. 6, 1876 — Indictment filed. Jan. 19, 1877 — Verdict, guilty. Jan. 22 — Sentence, one year in the State Prison. Jan. 30 — Appeal taken.	Feb. 16, 1877 — Transcript filed. April 30 — Judgment reversed and cause remanded for new trial.	Remittitur issued May 26, 1877.	
The People of the State of California ex rel. Jo Hamilton, Attorney - General, vs. Bidlock et al.	City and County of San Francisco, Fourth District Court.	Civil.	By Complaint — Proceeding in quo warranto to determine the legal status of defendants as a Board of Medical Examiners.	March 14, 1877 — Complaint signed by Attorney-General, and leave granted Haight & Taylor to sue in the name of The People. Haight & Taylor, attorneys for relator.			

<p>The People of the State of California by Jo. Hamilton, Attorney-General, ex rel. T. H. Reardon, vs. J. W. Reay, Edward Roper, H. Bockten et al.</p>	<p>City and County of San Francisco, Fifteenth District Court.</p>	<p>Civil.</p>	<p>By Complaint —An action to remove certain obstructions maintained by defendants from "Elm Avenue," in San Francisco, and open up said Avenue as a public street.</p>	<p>March 15, 1877.—Copy of complaint filed, and leave granted to sue in the name of The People, James C. Carey, attorney for relator.</p>		
<p>The People of the State of California vs. Robt. Gardner, Edgar Mills, and Mark Hopkins.</p>	<p>Sacramento Co. Sixth District Court.</p>	<p>Civil.</p>	<p>By Complaint —An action on the official bond of defendant, Robt. Gardner, as Surveyor-General and ex officio Register of the State Land Office, for certain defalcations and failures to perform certain official duties.</p>	<p>Dec. 4, 1876.—Complaint filed. Feb. 28.—Demurrer filed.</p>		<p>Still pending.</p>

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause, —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime.	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court--	Memorandum of Process Issued --	Remarks.
The People of the State of California vs. Robert Gardner.	Sacramento County, Sixth District Court.	Civil.	By Complaint —An action to recover of defendant the sum of \$41,215 39, the same being the amount of fees, moneys, revenues, etc., received by the defendant as Surveyor-General and Register of the State Land Office, and for which he has failed to account and pay over to the State.	Dec. 4, 1876—Complaint filed. March 21—Summons returned served.			Still pending.

B. W. Howser vs. Wm. Minis, Sur- veyor-General, etc.	Sacramento County, Sixth District Court.	Civil.	Petition and writ of man- date to com- pel defend- ant, as Sur- veyor-Gen- eral, to re- ceive and file certain applications to purchase certain lien lands.	July 25, 1876—Petition filed, and alternative writ issued. March 24, 1877—Answer filed. April 4—Dismissed upon motion of plaintiff.		
Fred. N. Sheldon vs. Wm. Minis, Sur- veyor-General.	Sacramento County, Sixth District Court.	Civil.	Petition and writ of man- date to com- pel defend- ant, as Sur- veyor-Gen- eral, to re- ceive and file certain applications to purchase certain lien lands.	Feb. 19, 1877—Petition filed and alternative writ issued. March 24—Answer filed. March 30—Matter tried and judgment rendered. Judgment: Let the per- emptory writ issue, as prayed for in the petition.		

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause—Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime.-----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued--	Remarks.
John Odell vs. W. B. C. Brown, Controller of State.	Sacramento County, Sixth District Court.	Civil.	Petition and writ of man- date to com- pel defend- ant, as Con- troller, to issue to plaintiff Controller's warrant upon Treas- urer of State against a Polson Branch State Prison F'd., for salary as Superin- tendent.	Sept. 14, 1876—Petition filed and alternative writ waived. March 7, 1877—Answer filed. March 30—Judg- ment: Let a peremptory writ issue as prayed for.			
The People of the State of Califor- nia ex rel. Isaac Thompson vs. J. W. Perry.	Santa Clara Co., Twenti- eth District Court.	Civil.	Complaint— An action against de- fendant for usurping corporate powers and exercising franchise.	March 22, 1877—Petition to sue in the name of The Peo- ple filed and leave granted. D. H. Herrington, attorney for relator.			

The People, etc., Respondents, vs. Ah Lung, Appellant.	Los Angeles Co., County Court.	Criminal.	Indictment — Assault with intent to commit murder.	Jan. 12, 1877 — Indictment filed. Jan. 25 — Verdict, guilty. Feb. 1 — Sentence, two years in the State Pris- on. Feb. 3 — Appeal taken.	March 6, 1877 — Transcript filed.	Remittitur is- sued July 30, 1877.
The People, etc., Respondents, vs. Ling Chung and Gee Lun, Appellants.	Colusa County, County Court.	Criminal.	Indictment — Assault with intent to commit murder.	Jan. 18, 1877 — Indictment filed. Feb. 2 — Verdict, guilty. Feb. 6 — Sentence, two years in the State Pris- on. March 9 — Appeal tak- en.	March 13, 1877 — Transcript filed. May 1, 1877 — Judge- ment and order affirmed.	Remittitur is- sued May 26, 1877.
The People, etc., Respondents, vs. H. G. Drew and Daniel Maloney, Appellants.	San Benito Co., County Court.	Criminal.	Indictment — Robbery.	Feb. 16, 1877 — Indictment filed. March 3 — Verdict, guilty. March 3 — Sentence, eighteen months in the State Prison. March 7 — Appeal taken.	March 19, 1877 — Transcript filed. April 11 — Judgment and order affirmed.	Remittitur is- sued May 7, 1877.
The People, etc., Respondents, vs. Wilnot Martin.	Santa Barbara Co., County Court.	Criminal.	Indictment — Felony (statutory); in doing cer- tain things declared to be a felony under the Trespass Act of 1874.	March 6, 1877 — Indictment filed. March 13 — Verdict, guilty, as charged in the In- dictment. March 16 — Sen- tence, one year in the State Prison. March 16 — Appeal taken.	March 24, 1877 — Transcript filed. May 1 — Judgment reversed — cause remanded, with direction to Court be- low to sustain the motion in arrest of judgment.	Remittitur is- sued May 28, 1877.

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District, and Court instituted, tried, and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution, and Nature of Demand or Crime-----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued..	Remarks.
The People of the State of California by Jo Hamilton, Attorney-General, vs. Adolph Pheister et al.	Santa Clara Co., Third District Court.	Civil.	By Complaint —An action to determine the right of defendant to exercise corporate powers and the franchise of maintaining a turnpike and toll road in Santa Clara County, and collect tolls thereon.	April 5, 1877—Petition to sue in the name of The People filed and leave granted. L. Archer, attorney for plaintiff.			
The People, etc., Respondents, vs. Charles Martin, Appellant.	San Bernardino Co., County Court.	Criminal.	Indictment—Robbery.	Jan. 6, 1877—Indictment filed. Feb. 7—Verdict, guilty. Feb. 12—Sentence, five years in the State Prison. Mar. 3—Appeal taken.	April 3, 1877—Transcript filed. July 10, 1877—Judgment and order affirmed.	Remittitur issued Aug. 6, 1877.	

<p>The People of the State of California ex rel. Jo Hamilton, Attorney-General,</p> <p>vs.</p> <p>The Point Lobos and San Francisco Toll Road Company.</p>	<p>City and County of San Francisco, Fifteenth District Court.</p>	<p>Civil.</p>	<p>Complaint—An action to exclude the defendants from all corporate rights and privileges and dissolve the corporation and forfeit its franchise to the City and County of San Francisco.</p>	<p>May 3, 1877—Copy of Complaint filed and leave granted. J. E. McElrath & E. J. Preston, attorneys for plaintiff, to sue in the name of The People.</p>	
<p>Mrs. Juliet Charleston vs. J.G. Estudillo, State Treasurer.</p>	<p>In the Supreme Court of the State of California.</p>	<p>Civil action.</p>	<p>By Petition and writ of mandate—An action to compel defendant, as State Treasurer, to pay interest on Controller's warrant No. 1989, against Swamp Land District No. 18 Fund.</p>	<p>April 23, 1877—Petition filed. Alternative writ waived and facts stipulated. April—Petition heard and prayer thereof granted.</p>	<p>April 30, 1877—Let a peremptory writ issue as prayed for. April 30—Petition for rehearing filed. May 2—Rehearing denied.</p>
				<p>May 2, 1877—Peremptory writ issued. May 5—Writ served. May 7—Returned.</p>	

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

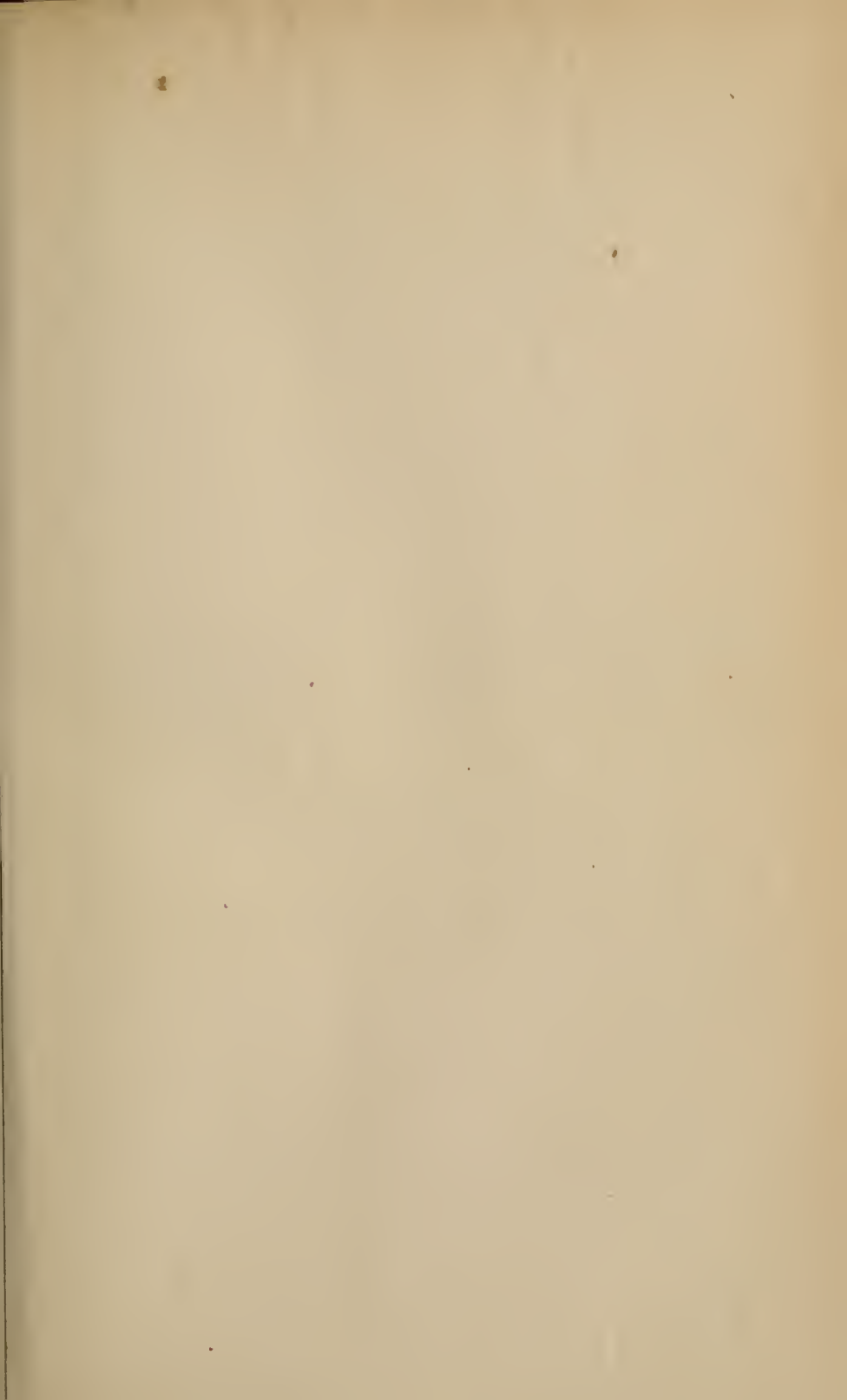
TITLE OF CAUSE.	In what County, District, and Court instituted, tried and adjudged -----	Character of Cause —Civil or Criminal -----	Mode of Prosecution and Nature of Demand or Crime -----	Stage of Proceedings in Court below -----	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
<p>The People of the State of California, by the Board of State Prison Directors, consisting of Wm. Irwin, Governor, Jas. A. Johnson, Lieutenant-Governor, and Thos. Beck, Secretary of State, vs. M. Miles, Robert Cushing, N. P. Perine, David Mahoney, Howard Chapman, A. J. Schrader, H. De La Montanya, G. Rasech, H. T. Holmes, Daniel Sweeney, D. L. McDonald, J. W. Farren, Edward Cammus, Arthur K. Hawkins, H. G. Fiske, Henry Croner, and H. C. Partridge.</p>	<p>Sacramento County, Sixth District Court.</p>	<p>Civil.</p>	<p>By Complaint suit to recover the sum of two hundred and ninety-eight thousand seven hundred and eighty-four dollars, as damages for the failure of the defendant, Miles, to carry out and complete the Branch State Prison building at Folsom, as per contract with plaintiff.</p>	<p>Sept. 6, 1876—Complaint filed. April 30, 1877—Answer filed.</p>			

The People, etc., Respondents, vs. Vieria.	San Luis Obispo County.	Criminal.	Indictment — Assault with a deadly weapon.	March 8, 1877—Indictment filed. March 19 and 20— Trial had and jury return a verdict of guilty. March 27—Sentence, one year in the State Prison. March 30, 1877—Appeal taken.	April 17, 1877—Transcript filed.		Still pending.
The People, etc., Respondents, vs. A. B. Stevens, Appellant.	San Joaquin Co., County Court.	Criminal.	By indictment — —Burglary.	Nov. 16, 1875—Indictment filed. Feb. 12, 1876—Ver- dict, guilty. Feb. 23—Sen- tenced to imprisonment in State Prison for a term of ten years. Appeal taken Feb. 6, 1877.	April 30, 1877—Transcript filed.		Still pending.
The People, etc., Respondents, vs. Ah Moon, Appellant.	City and Coun- ty of San Francisco, Fourth Dis- trict Court.	Criminal.	Indictment — Murder.	March 6, 1877—Indictment filed. April 5—Verdict, guilty of murder in the first degree. Punishment, imprisonment for life. Judgment rendered May 4, 1877. May 7, 1877— Appeal taken.	May 17, 1877—Transcript filed. August 13, 1877— Judgment and order af- firmed.	Remittitur is- sued Sept. 7, 1877.	
The People, etc., Respondents, vs. James Lee, Appellant.	Alameda Coun- ty, County Court.	Criminal.	Indictment — Burglary.	April 7, 1877—Indictment filed. April 17—Verdict, guilty of burglary in sec- ond degree. Sentenced to one year in State Prison. May 9, 1877—Appeal taken.	June 8, 1877—Transcript filed. July 10, 1877— Judgment and order af- firmed.	Remittitur is- sued July 14, 1877.	

COPY OF ATTORNEY-GENERAL'S DOCKET—Continued.

TITLE OF CAUSE.	In what County, District and Court instituted, tried and adjudged.	Character of Cause Civil or Criminal.	Mode of Prosecution and Nature of Demand or Crime.	Stage of Proceedings in Court below.	Memorandum of Judgment in Supreme Court.	Memorandum of Process Issued.	Remarks.
The People, etc., vs. Francis J. Springer. Appellant.	Solano County, Co. Court.	Criminal.	Indictment— Arson in second degree.	April 5, 1877—Indictment filed. April 27—Verdict, guilty of arson in second degree. May 12—Sentenced for a term of ten years in the State Prison. June 1, 1877—Appeal taken.	June 8, 1877—Transcript filed. July 28—Judgment and order affirmed.	Remittitur issued Aug. 23, 1877.	
Drury Melone vs. The People of the State of California.	Sacramento County, Sixth District Court.	Civil action.	Complaint— An action to recover of defendant \$1,466, as salary as member of Board of Examiners.	Complaint filed April 25, 1876. June 3—Answer filed. Sept. 16—Judgment for plaintiff for amount sued for and \$— costs of suit. Oct. 6, 1876—Appeal taken.	Transcript on appeal filed. Nov. 13, 1876—Argued and submitted. Jan. 6, 1877—Judgment and order affirmed.	Remittitur issued Jan. 6, 1877.	

J. J. Green vs. The People of the State of California.	Sacramento County, Sixth District Court.	Civil action.	Complaint— An action to recover of defendant the sum of \$1,720, balance due plaintiff as salary as a member of the State Board of Examiners.	Complaint filed April 25, 1876. June 3, 1876—Answer filed. Sept. 16, 1876—Judgment for plaintiff for amount prayed for and his costs of suit.	Transcript on appeal filed. Nov. 13, 1876—Argued and submitted. Jan. 6, 1877— Judgment and order affirmed.	Jan. 6, 1877— Remittitur issued.
John L. Love vs. The People of the State of California.	Sacramento County, Sixth District Court.	Civil action.	Complaint— An action to recover of defendant \$2,150, balance due plaintiff as salary of member of State Board of Examiners.	Oct. 25, 1876—Complaint filed. Oct. 23, 1876. Answer filed. Oct. 25, 1876— Judgment for plaintiff for amount sued for and his costs of suit. Oct. 25—Appeal taken.	Transcript on appeal filed Nov. 13, 1876. Jan. 6, 1877 —Judgment and order affirmed.	Jan. 6, 1877— Remittitur issued.
The People of the State of California ex rel. John Hamilton, Attorney-General, vs. The Sonoma and Marin Railroad Company.	City and County of San Francisco, District Court.	Civil action.	Complaint— An action to enjoin defendant from obstructing the navigation of Calinas Creek.	Petition for authority to sue in the name of The People, etc., filed, and authority issued to H. H. Haight, this 12th day of July, 1877.		





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BIENNIAL REPORT

OF THE

SUPERINTENDENT OF STATE PRINTING

TO THE

LEGISLATURE OF THE STATE OF CALIFORNIA.

TWENTY-SECOND SESSION—1877-8.

REPORT.

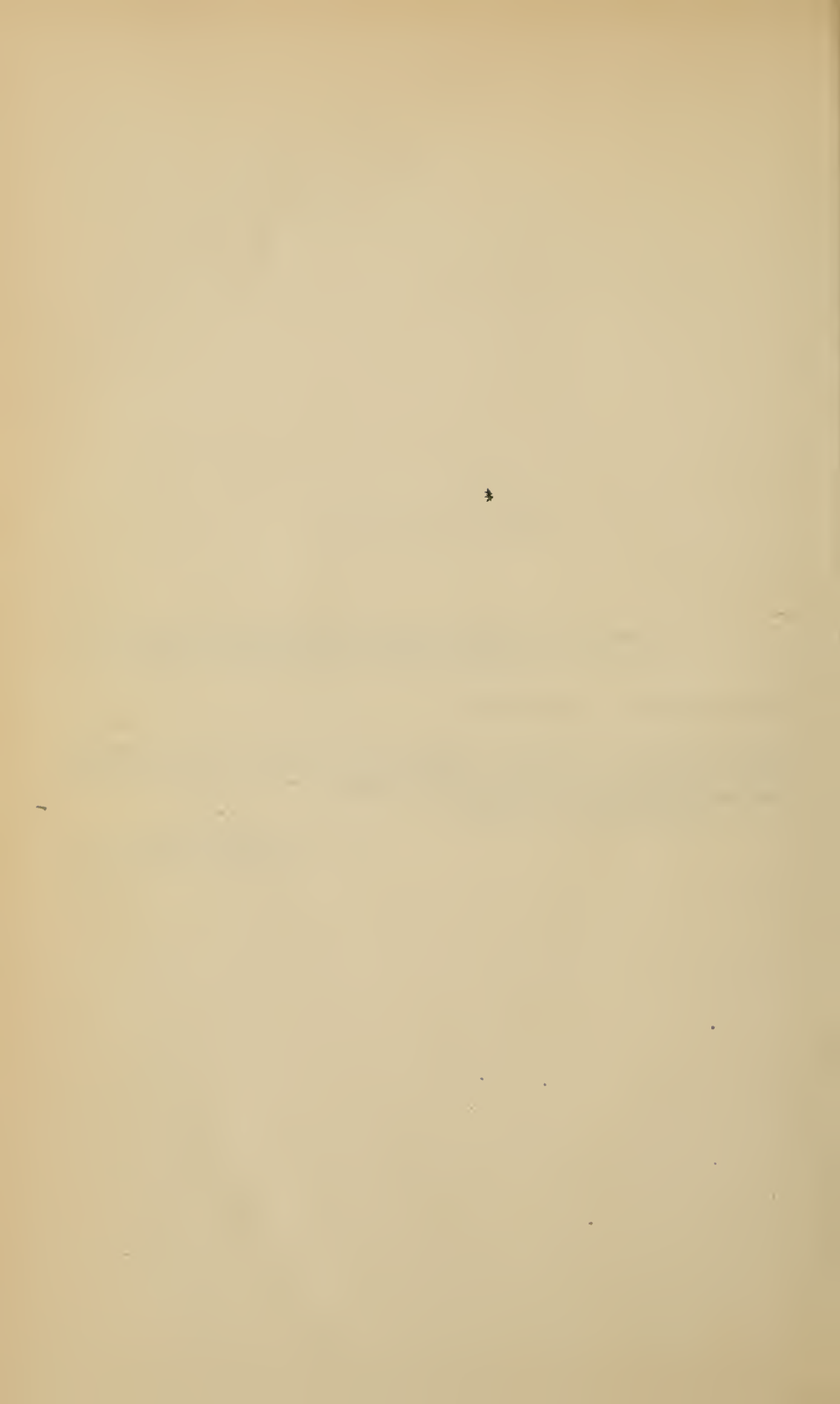
OFFICE OF SUPERINTENDENT OF STATE PRINTING, }
SACRAMENTO, January 15th, 1878. }

To the Legislature of California :

GENTLEMEN: In obedience to the requirement of law, I have the honor to transmit herewith a printed copy of the Annual Reports to the Governor respecting the public printing.

Respectfully submitted,

F. P. THOMPSON,
Supt. State Printing.



SUPERINTENDENT'S REPORT—1876.

OFFICE OF SUPERINTENDENT OF STATE PRINTING, }
SACRAMENTO, December 1st, 1876. }

To his Excellency,
WILLIAM IRWIN,
Governor of California:

SIR: In accordance with law, I have the honor to make the following report of the transactions of the Department of State Printing. Inasmuch as there has been no report since the passage of the law making a change in the manner of doing the public printing, I have deemed it expedient to give a summary of action taken previous to my appointment, under the provisions of the Acts approved March twenty-sixth, eighteen hundred and seventy-two, and March thirtieth, eighteen hundred and seventy-four, providing for a State Printing Office, and creating the Office of Superintendent of State Printing. Section twelve of the first Act appropriated twelve thousand dollars (\$12,000 00) for the erection of a suitable building for a State Printing Office. The Act of March thirtieth, eighteen hundred and seventy-four, authorized the Board of State Capitol Commissioners to expend this appropriation, or so much thereof as might be necessary, in converting a portion of the building known as the "Governor's Mansion" into a State Printing Office. The following table (Exhibit "A") shows the manner in which this appropriation was expended:

EXHIBIT A.

An itemized statement of moneys paid for construction of State Printing Office.

Woodwork	\$1,117 16
Paints, oils, etc.	828 82
Painting	570 00
Planking and grading streets	378 00
Carpenter work, and salary of Superintendent of Construction	2,551 45
Brick-laying and mason work	255 50
Brick	336 00
Labor	286 00
Merchandise	55 87
Lumber	904 36
Lime	70 94
Hardware	531 53
Machinery	1,023 00
Machine work	674 47
Tinning roof	60 00
Sand	64 77
Plumbing and gas fixtures	939 20
Plastering	158 34
Amount carried forward	\$10,805 41

Amount brought forward	\$10,805 41
Tinware, etc.	142 23
Steam engine and fixtures	1,022 97
Drayage	10 00
Whitewashing	15 00
Blacksmithing	36 50
Counter	146 25
Marble slab	35 00
Miscellaneous	155 71
	<hr/>
	\$12,369 07
Appropriation March 30th, 1874	\$12,000 00
Transfer from "Purchase of Material Fund," Act of April 3d, 1876	374 88
	<hr/>
	\$12,374 88
Expended twenty-sixth fiscal year	\$5,295 30
Expended twenty-seventh fiscal year	7,073 77
	<hr/>
	12,369 07
Balance unexpended	<hr/>
	\$5 81

Section eleven of the Act of March twenty-sixth, eighteen hundred and seventy-two, appropriated twenty thousand dollars (\$20,000 00) for the purchase of the necessary printing materials, presses, and machinery for doing all the State Printing. Section two of the same Act provided for the appointment of a Superintendent of State Printing. On the first of September, eighteen hundred and seventy-five, Governor Pacheco appointed E. G. Jefferis to that position. The Superintendent, by authority of law, advertised for proposals for furnishing the necessary printing materials and paper for doing the State printing. The award for printing material was made to Painter & Co. for fourteen thousand nine hundred and seventy-three dollars and fifty-seven cents (\$14,973 57). This award covered the bulk of printing material required, but it was impossible to include in the specifications, in advance of the commencement of operations, every article necessary for the successful inauguration of practical work. Supplemental orders were given by the Superintendent for such things as the exigencies of the case required. The following table (Exhibit "B") shows, in detail, the expenditure of the twenty thousand dollars (\$20,000 00) appropriated for purchase of material:

EXHIBIT B.

An itemized statement of moneys paid for purchase of material.

Type, presses, etc.	\$16,907 74
Lumber, etc.	269 53
Merchandise	371 50
Machine work	226 50
Carpenter work	371 71
Paints, oils, etc.	198 98
Hardware	52 69
Employés	272 62
Drayage	161 10
Furniture	192 50
Labor	89 25
Fuel	72 00
Horse and wagon	345 00
Plastering	12 00
Gas fixtures	82 00
	<hr/>
Amount expended	\$19,625 12
Amount transferred to "Construction Fund"	374 88
	<hr/>
Total appropriation	\$20,000 00

Sealed proposals were received, and contracts awarded, in accordance with section nine of the Act of March twenty-sixth, eighteen hundred and seventy-two, for one year, from October first, eighteen hundred and seventy-five, by the Board of Examiners and said Superintendent of State Printing, to the parties herein named, for furnishing paper of the qualities and weights enumerated below:

BLAKE, ROBBINS, & Co.

Butler book paper, all weights, eighteen cents per pound.
 Enameled cover paper, twenty by twenty-four and twenty-two by twenty-eight, thirteen dollars per ream.

J. G. HODGE & Co.

Note paper, six-pound, Carew Extra, twenty-six cents per pound.
 Demy, twenty-eight-pound Carew Extra, twenty-two and one-half cents per pound.
 Medium, thirty-six-pound Carew Extra, twenty-three cents per pound.
 Royal, forty-four-pound Carew Extra, twenty-three cents per pound.
 Super Royal, fifty-four-pound Carew Extra, twenty-four cents per pound.
 Imperial, seventy-two-pound Carew Extra, twenty-four cents per pound.
 Assorted Medium Cover, twenty by twenty-four, thirty-five-pound, five dollars and fifty cents per ream.

DUTTON & WITHINGTON.

Letter paper, twelve-pound Ravelstone Mills, twenty-five cents per pound.
 Flat Letter, ten-pound and twelve-pound Ravelstone Mills, twenty-one cents per pound.
 Flat Cap, all weights, Ravelstone Mills, twenty-one cents per pound.
 Folio Post, twenty-two and twenty-four-pound, twenty-one cents per pound.

On the ninth of December, eighteen hundred and seventy-five, I was duly appointed and commissioned, by your Excellency, Superintendent of State Printing, and immediately entered upon my duties and put into practical operation the new system of doing the public printing.

The State Printing law, as originally enacted, made no provision for the manner of keeping the accounts relative to work done and the cost of the same. It devolved upon myself, as the first Superintendent of State Printing, after the commencement of operations under the new law, to organize the work and adopt such a system of keeping the books as to protect the interests of the State and secure an economical administration of the affairs of the office. In the discharge of this responsible duty, especial care has been taken to arrange the system so that the cost of any branch of the public printing may be readily ascertained, and the practical working of the whole system so simplified as to be easily understood.

The appropriation for the twenty-seventh fiscal year having been exhausted before my incumbency, the Legislature appropriated, on December twenty-second, eighteen hundred and seventy-five, the sum of forty-one thousand dollars (\$41,000 00) for the support of the State Printing Office until June thirtieth, eighteen hundred and seventy-six.

The following statement, marked Exhibit "C," is an itemized account of the expenditure of the above appropriation:

EXHIBIT C.

An itemized statement of moneys paid for support of State Printing Office from December 1st, 1875, to June 30th, 1876—remainder of twenty-seventh fiscal year.

Employés.....	\$20,577 23
Binding, folding, and stitching.....	1,687 89
Paper.....	12,824 26
Paper, envelopes, etc.....	1,861 45
Lithographing.....	889 00
Ink.....	135 00
Fuel.....	636 00
Gas.....	476 50
Merchandise.....	125 71
Drayage.....	79 00
Repairing machinery.....	63 00
Boarding horse.....	100 00
Carpenter work.....	41 50
Water.....	105 00
Plumbing.....	174 58
Hardware.....	78 18
Machine work.....	60 07
Furniture.....	213 37
Freight.....	482 32
Expressage.....	47 25
Telegraphing.....	31 85
Stamps, and post-office box rent.....	44 50
Glazing.....	4 75
Porterage in Superintendent's office.....	105 00
Miscellaneous.....	156 50
	<hr/>
	\$41,000 00

The general appropriation bill, approved April third, eighteen hundred and seventy-six, appropriated the sum of one hundred thousand dollars (\$100,000 00) for the support of the State Printing Office for the twenty-eighth and twenty-ninth fiscal years.

Below is given Exhibit "D," a detailed statement of the expenditure of so much thereof as has been used up to December first, eighteen hundred and seventy-six:

EXHIBIT D.

Employés.....	\$7,553 62
Binding, ruling, folding, and stitching.....	8,405 80
Paper.....	1,506 75
Type, etc.....	1,953 89
Ink.....	416 80
Fuel.....	301 00
Merchandise.....	207 66
Lithographing.....	1,421 75
Gas.....	70 00
Ice.....	43 93
Boarding horse.....	133 00
Drayage.....	31 50
Expressage.....	19 80
Freight.....	24 50
Porterage and postage.....	105 00
Carpenter work.....	45 15
Plumbing.....	16 42
Water.....	45 00
Machine work.....	47 00
Labor.....	48 00
Washing.....	35 62
Repairing harness.....	14 25
Miscellaneous.....	4 75
	<hr/>
	\$22,451 19

RECAPITULATION.

DR.	<i>Appropriation for twenty-eighth and twenty-ninth fiscal years.</i>		CR.
December 1st, 1876—To expenses..	\$22,451 19	July 1st, 1876—By appropriation..	\$100,000 00
December 1st, 1876—To balance---	77,548 81	December 1st, 1876—By balance--	77,548 81

From which it appears that there is a balance of the one hundred thousand dollars (\$100,000 00) unexpended on this date, of seventy-seven thousand five hundred and forty-eight dollars and eighty-one cents (\$77,548 81).

I have the honor to submit the foregoing report of the operations of this department of the State Government to December first, eighteen hundred and seventy-six.

Respectfully, your obedient servant,

F. P. THOMPSON,
Supt. of State Printing.

APPENDIX A.

Below is given an estimate showing the cost of printing in each department of the State Government for the first year under the present law. Also, what would have been the cost under the old law, showing a difference in favor of the present system, in one year, of twenty-two thousand eighty-two dollars and twenty-five cents on the work executed :

COMPARATIVE TABLE.

Showing the difference in cost of doing the State printing for one year, from December 1st, 1875, to December 1st, 1876, under the old law and the present system. -

DEPARTMENTS.	Present System.	Old Law.	Difference.
Senate -----	\$12,106 10	\$29,895 66	\$8,514 13
Assembly -----	9,275 43		
Statutes, 1875-6 -----	6,380 43	9,083 56	2,703 13
Amendments to Codes, 1875-6 -----	2,610 16	3,575 12	964 96
Senate Journal -----	2,717 12	2,900 31	183 19
Assembly Journal -----	2,269 48	3,186 73	916 25
Appendices to Journals (Vols. 4 and 5) -----	1,164 99	1,794 83	629 84
Executive Department -----	898 85	1,397 61	498 76
Secretary of State -----	771 98	1,429 69	657 71
Controller -----	293 51	459 68	166 17
Treasurer -----	309 20	448 21	139 01
Superintendent of Public Instruction -----	3,639 05	5,398 57	1,759 32
Surveyor-General -----	832 07	1,328 18	496 11
Attorney-General -----	169 68	279 28	109 60
Supreme Court -----	2,494 00	3,819 11	1,325 11
Adjutant-General -----	1,470 78	1,845 39	374 61
State Library -----	459 76	748 05	288 29
Superintendent State Printing -----	226 68	382 32	155 64
Board of Equalization -----	167 07	268 47	101 40
Board of Transportation Commissioners -----	541 95	733 41	191 46
State Normal School -----	393 40	579 65	186 25
State Board of Health -----	88 64	141 91	53 27
Board of Examiners -----	43 62	104 80	61 18
State Capitol Commissioners -----	8 40	15 25	7 85
Harbor Commissioners -----	41 48	61 82	20 34
State Prison Directors -----	171 36	365 19	193 83
Insurance Commissioner -----	855 95	1,138 15	282 20
State Agricultural Society -----	1,886 64	2,615 13	728 49
Board of Pilot Commissioners -----	7 84	19 25	11 41
University of California -----	742 04	1,004 53	322 49
State Land Commission -----	62 44	102 69	40 25
Totals -----	\$53,100 10	\$75,182 35	\$22,082 25

SUPERINTENDENT'S REPORT—1877.

To his Excellency,
 WILLIAM IRWIN,
 Governor of California:

SIR: By requirement of law, I herewith submit my Second Annual Report, giving, in detail, the cost of public printing during the year ending December first, eighteen hundred and seventy-seven. My First Annual Report gave a complete summary of cost of public printing to December first, eighteen hundred and seventy-six. You will find, in the following table, marked Table I, the itemized expenditures from date of last report to December first, eighteen hundred and seventy-seven:

TABLE I.

Itemized expenditures from date of last report to December 1st, 1877.

Employés	\$19,652 00
Binding, ruling, folding, and stitching	5,576 89
Paper stock	1,983 39
Roller molds and press castings	309 31
Ink	541 00
Fuel	1,206 08
Repairs—resetting boiler	393 75
Water	135 00
Gas	233 75
Machine work, smoke-stack, etc.	210 61
Ice	18 45
Merchandise	416 21
Painting and whitewashing	45 00
Drayage	68 50
Carpenter work—wood-shed	207 50
Lumber—wood-shed	167 24
Washing towels	21 75
Boarding and shoeing horse	336 50
Labor	87 00
Engraving, etc.	200 00
Filterer and tank	54 50
Expressage, postage, freight, and telegraphing	192 45
Total	\$32,056 88

Below is appended Table II, an exhibit of the relative cost to the State of work executed for the various departments since the commencement of operations under the new system :

TABLE II.

<i>Department Printing.</i>	
Senate	\$11,336 59
Assembly	10,551 56
Statutes, 1875-6	6,380 43
Amendments to Codes, 1875-6	2,610 16
Statutes, 1875-6 (Spanish)	4,263 91
Amendments to Codes (Spanish)	651 33
Senate Journal	2,717 12
Assembly Journal	2,269 48
Appendices to Journals, Vols. 4 and 5	3,394 62
Executive Department	1,273 31
Secretary of State	1,595 50
State Controller	1,818 14
State Treasurer	641 84
Superintendent of Public Instruction	6,774 14
Surveyor-General	2,170 51
Attorney-General	658 32
Supreme Court	4,398 63
Adjutant-General	2,077 68
State Librarian	657 57
Superintendent of State Printing	423 29
Board of Equalization	1,014 40
Board of Transportation Commissioners	7,153 37
State Normal School	863 09
State Board of Health	1,066 03
State Board of Examiners	55 97
State Capitol Commissioners	19 40
State Harbor Commissioners	147 17
State Prison Directors	1,260 19
Insurance Commissioner	1,760 86
State Agricultural Society	2,965 56
Pilot Commissioners	35 44
University of California	2,009 88
State Land Commission	173 60
Senate Chinese Investigating Committee	2,739 09
West Side Irrigation Commissioners	582 50
Commissioners of Yosemite and Mariposa Big Tree Grove	101 91
Deaf, Dumb, and the Blind Asylum	150 10
Stockton Insane Asylum	317 79
Napa Insane Asylum	332 51
Fish Commissioners	174 61
Total	\$89,588 60

The following, marked Table III, shows the miscellaneous expenditures incidental to the efficient operation of the State Printing Office, and not properly chargeable to cost of department printing.

Owing to a proper want of care, or mistaken judgment in the fitting up of the machinery of the office, it has been necessary to do much of the work over a second time—the most expensive items being the resetting of the boiler, and putting up a new smoke-stack, as shown below :

TABLE III.

<i>Miscellaneous Expenditures.</i>	
Roller molds and press castings	\$309 31
Fuel on hand	800 00
Resetting boiler, and repairs	393 75
Smoke-stack and machine work	210 61
Wood-shed	373 74
Filterer and tank	51 50
Total	\$2,141 91

Taking the total cost of department printing, eighty-nine thousand five hundred and eighty-eight dollars and sixty cents (\$89,588 60); the sum of miscellaneous expenditures, two thousand one hundred and forty-one dollars and ninety-one cents (\$2,141 91), and value of paper stock on hand, three thousand seven hundred and seventy-seven dollars and fifty-six cents (\$3,777 56), and we have an amount equal to the total sum expended—leaving a balance of forty-five thousand four hundred and ninety-one dollars and ninety-three cents (\$45,491 93) unexpended out of the appropriation of one hundred thousand dollars (\$100,000 00) for the support of the State Printing Office for the twenty-eighth and twenty-ninth fiscal years—a sum amply sufficient to do all the necessary printing required during the remainder of the twenty-ninth fiscal year.

For the first time in the history of the State, the Legislature will not be called on to pass a deficiency bill on account of the public printing.

I will now call your attention to the difference in the cost of comparatively the like kind and quantity of work, under the old system, from December first, eighteen hundred and seventy-three, to December first, eighteen hundred and seventy-five, and the cost under the present system, from December first, eighteen hundred and seventy-five, to December first, eighteen hundred and seventy-seven.

By reference to the Controller's books, I find that warrants were issued to the State Printer for work executed between December first, eighteen hundred and seventy-three, and December first, eighteen hundred and seventy-five, amounting to one hundred and sixty-eight thousand nine hundred and sixty-one dollars and seventy cents (\$168,961 70). The amount expended for printing, permanent material, paper, and paper stock unconsumed, for two years, under the new system, has been ninety-five thousand five hundred and eight dollars and seven cents (\$95,508 07). Deduct from this sum the amount paid for permanent fixtures and material purchased, two thousand one hundred and forty-one dollars and ninety-one cents (\$2,141 91), and the value of paper stock on hand, three thousand seven hundred and seventy-seven dollars and fifty-six cents (\$3,777 56), and we find the amount expended for printing for the two years is eighty-nine thousand five hundred and eighty-eight dollars and sixty cents (\$89,588 60). Deduct the latter amount from one hundred and sixty-eight thousand nine hundred and sixty-one dollars and seventy cents (\$168,961 70), and we have a balance in favor of the present system, in two years, of seventy-nine thousand three hundred and seventy-three dollars and ten cents (\$79,373 10). Deduct from this latter sum four thousand eight hundred dollars (\$4,800 00), two years salary of Superintendent of State Printing, and two thousand dollars, ten per cent. wear and tear on twenty thousand dollars (\$20,000 00) worth of material, and three hundred and seventy-seven dollars (\$377 00), ten per cent. interest on paper stock carried, and we still have a net saving, in two years, of seventy-two thousand one hundred and ninety-five dollars and fifty-four cents (\$72,195 54).

Under the old law, it was necessary to employ Copying Clerks to copy all bills ordered printed. By reference to the Controller's books, I find that the amount paid at the twenty-first session of the Legislature, for this purpose, was six thousand seven hundred and ten dollars. Under the present system, the Superintendent of State Printing receipts for and prints from the original bill, thereby doing

away with the necessity for Copying Clerks, saving to the State, in this way, during one session of the Legislature, six thousand seven hundred and ten dollars (\$6,710 00), as shown by the above figures from the Controller's books. There are various other small savings brought about by the operation of the new system, to which it is not necessary at this time to allude.

The amount of printing ordered by the last Legislature was largely in excess of what has been customary. The following items, enumerated below, are a portion of the work never before ordered:

Two hundred and forty copies of each day's proceedings of the Senate, laid on the members' desks every morning, costing seven hundred and fifty dollars (\$750 00); a tabulated weekly statement of Senate and Assembly bills, costing one thousand three hundred and ninety-one dollars and thirty-five cents (\$1,391 35). Heretofore only one thousand six hundred and eighty copies of the Statutes were printed; last year two thousand two hundred and fifty were issued, the extra copies costing one thousand three hundred and fifty dollars (\$1,350 00); Reports of Insurance Commissioner, one thousand seven hundred and sixty dollars and eighty-eight cents (\$1,760 88).

In point of quality and style, it is conceded that the work done in the State Printing Office will not suffer by comparison with similar work executed in any of the States of the Union, or that done by former State Printers.

In conclusion, I desire to call the attention of your Excellency to the fact that the Statutes and the Journals of both branches of the Legislature might have been printed and delivered much sooner than they were, had it not been for the delay in receiving the copy and indices from the office of the Secretary of State. The last form of the Statutes was printed May nineteenth, but we did not receive copy for the first form of the index until June ninth. The copy for the last form of the index was received June twelfth. The last form of the Codes was printed May twenty-ninth; copy for first form of index to Codes received June twelfth. The Senate Journal was all printed, except the index, on the third day of April; the copy for the index was not received until September fourth. If the index had been made immediately upon the completion of the body of the Journal, the same could have been ready for distribution by the thirtieth of April, instead of being delayed until October twenty-first. The last form of the Assembly Journal was printed August third; copy of index received October twenty-third; delivered Assembly Journal to Secretary of State, for distribution, November fourteenth. Had the index been compiled without delay, the Journal could have been delivered by the thirtieth of August.

The delay in the office of the Secretary of State was occasioned by the failure of the last Legislature to make the usual appropriation previously allowed the Secretary for compiling these indices, and the work had to be done at such times as the regular clerks were not employed in the ordinary routine of duty in the office. Had the usual appropriation, above alluded to, been made, a competent person would have been employed to do the work, and the delay complained of avoided.

The duties of the Secretary of State are so varied and onerous, I would suggest the propriety of having these indices prepared in this department, thereby preventing similar delay in the future.

PRINTING THE STATUTES.

In this connection, I would suggest that each law might be printed as soon as it is passed, a proof sheet furnished to the Committee on Enrollment, and by them compared, and if found correct, one copy be printed on parchment paper, signed by the proper officers, and the printed copy transmitted to the Governor, instead of an enrolled copy, and, if signed by him, become the record to be transmitted to the Secretary of State for file. There are several important ends accomplished by the above suggestion :

First—It would save the entire cost of enrolling bills—which forms a very large item in the contingent expenses of the respective houses—which at the last session of the Legislature reached the amount of six thousand one hundred and sixty-one dollars and seventy cents (\$6,161 70).

Second—A printed law can never be changed without detection—a written one can.

Third—It would bring the record into a more compact and durable shape, greatly facilitating reference to the same when necessary.

Fourth—When this printed bill was signed by the Governor and became law, the requisite sheets could be printed to form the edition of the Statutes, thereby saving the cost of recopying the laws from the enrolled bills, by the Secretary of State, for the printer.

Should this plan be adopted, the Statutes would be ready for distribution within thirty days after the adjournment of the Legislature. Two hundred and forty copies of each law might be printed for distribution to the members of both houses, the only additional cost being paper and press-work, as the one composition would answer for all the editions.

ADDITIONAL FACILITIES.

The printing material and presses owned by the State, as far as they go, are of the very best of their respective kinds. Every care has been taken in the arrangement, handling, and keeping of the same—a personal inspection of which is respectfully invited. The demands upon the capacity of the office are constantly increasing, and additional facilities must soon be provided; but, as the foundation is well laid, it can be built upon to meet the demands of the public service at a comparatively small additional outlay.

All of which is respectfully submitted,

F. P. THOMPSON,
Supt. of State Printing.

APPENDIX B.

Showing the name, weight, number of reams, and value of paper stock purchased, consumed, and on hand, up to December 1st, 1877.

KIND AND QUALITY OF STOCK.	RECEIVED.			Value	CONSUMED.			Value	ON HAND.			Value
	Reams	Sheets	Thousand		Reams	Sheets	Thousand		Reams	Sheets	Thousand	
40 lb book paper	805			\$5,796 00	805			\$5,796 00	158			\$1,365 12
48 lb book paper	428			3,697 92	270			2,332 80				
70 lb book paper	173			2,332 23	135			1,979 43	28			352 80
News paper	36			231 00	36			231 00				
Cover paper	72	240		656 50	72	240		656 50				
Brief paper	11			165 00	6	246		97 50	4	240		67 50
Manila paper				26 55				26 55				
70 lb tinted book paper	11	240		207 00	9	240		171 00	2			36 00
Bond paper		37,000		683 00		37,000		683 00				
6 lb commercial note	30			46 80	30			46 80				
28 lb demy	93			628 70	91			616 10				12 60
36 lb medium	63			570 60	44			412 28	19			157 32
44 lb royal	15			148 12	6			57 04	9			91 08
54 lb super royal	23			306 24	10			137 76	3			168 48
72 lb imperial	8			138 24	2			34 56	6			103 68
10 lb flat letter	105			220 50	47			98 70	58			121 80
12 lb flat letter	82			206 64	82			206 64				
12 lb ruled letter	48			144 00	15	240		46 50	32	240		97 50
12 lb letter-heads	50			135 00	20			54 00	30			81 00
14 lb flat cap	96			282 24	38			111 72	58			170 52
16 lb flat cap	112			376 32	71			238 56	41			137 76
18 lb flat cap	72			272 16	55			207 90	17			64 26
20 lb flat cap	48			201 60	20			84 00	28			117 60

22 lb folio post	40	184	80	40	184	80	40	184	80
24 lb folio post	54	272	16	49	246	96	5	225	20
Cigarette paper	10	25	00	1	2	50	9	22	50
6 lb Nolia note	5	13	80	5	13	80			
12 lb Nolia letter	3	14	92	3	14	92			
Tissue paper	2	4	55	1	2	75	366	1	80
12 lb Eureka folio	2	5	76	1	2	88	1	2	88
36 lb P. O. paper	5	42	90	1	11	70	4	31	20
Folio blotting paper	1	17	50	1	17	50			
21 lb H. M. medium	4	56	50	1	56	50			
Press tape and board		12	10		12	10			
Assorted card		104	50		62	50			42 00
No. 5 envelopes (white)	131	58	75		37	75		5	21 00
No. 5 envelopes (light buff)	10	35	00		3	50		9	31 50
No. 5 envelopes (canary)	10	35	00					10	35 00
No. 5 envelopes (open end)	1	3	75		1	3	75		
No. 6 envelopes (white)	31	131	75		31	131	75		
No. 6 envelopes (light buff)	10	40	00					10	40 00
No. 6 envelopes (canary)	10	40	00					10	40 00
No. 6 envelopes (cream antique)	6	26	00		6	26	00		
No. 9 envelopes (white)	124	105	10		124	105	10		
No. 9 envelopes (light buff)	10	75	00		7	52	50	3	22 50
No. 9 envelopes (canary)	10	80	00		7	60	00	21	20 00
No. 9 envelopes (open end)	3	9	00		3	9	00	4	33 00
No. 10 envelopes (white)	29	226	50		25	193	50	1	4 12
No. 10 envelopes (light buff)	11	90	75		10	86	63	61	55 44
No. 10 envelopes (canary)	12	105	75		5	50	31		
No. 11 envelopes (white)	7	76	50		7	76	50		
No. 11 envelopes (cloth-lined)	1-5	11	00		1-5	11	00	11	15 40
No. 12 envelopes (white)	16	109	25		8	93	85	24	34 00
No. 12 envelopes (light buff)	11	133	25		8	99	00	21	32 00
No. 12 envelopes (canary)	10	125	00		7	93	00	1-5	13 00
No. 12 envelopes (cloth-lined)	1-5	43	00					2	22 00
No. 14 envelopes (white)	12	134	00		10	112	00		
No. 14 envelopes (light buff)	1	12	50		1	12	50	1-5	7 50
No. 14 envelopes (cloth-lined)	1-5	7	50						
Twine		7	35			7	35		
Book ink						9	00		
Webster's Dictionary		13	50						13 50
Three cases		3	00						3 00
Gummed folio		1	25			1	25		
Amount carried forward		\$19,945	75			\$16,231	49		\$3,713 72

APPENDIX B—Continued.

KIND AND QUALITY OF STOCK.

KIND AND QUALITY OF STOCK.	RECEIVED.			Value	CONSUMED.			Value	ON HAND.			Value
	Reams	Sheets	Thousand		Reams	Sheets	Thousand		Reams	Sheets	Thousand	
Amount brought forward				\$19,945 75				\$16,231 49				\$3,713 72
Two miniature blanks				4 50				4 50				
Postal cards				9 00				9 00				
Slegg ruler and pencils				3 25								3 25
Quarto demy journal				4 50								4 50
Demy record—4 quires				3 00								3 00
Cap record—10 quires				10 00								10 00
Demy journal—6 quires				9 00								9 00
Demy ledger—8 quires				12 00								12 09
Demy record—5 quires				7 50								7 50
Demy day book—8 quires				12 00								12 00
Demy index				2 50								2 50
Cartage				10 50				10 50				
Totals				\$20,033 50				\$16,255 49				\$3,777 56

APPENDIX C.

We append below, for reference, the list of State Printers since the organization of the State Government, the amounts each received from the State treasury, the annual cost of printing, and the total amount paid for printing up to the present time:

Statement of amount of each State Printer's Account.

STATE PRINTERS.	Amounts.	Annual Cost of Printing.
J. Winchester.....	\$117,950 38	\$117,950 38
Eugene Casserly.....	85,626 92	85,626 92
G. K. Fitch & Co.	61,640 67	61,640 67
V. E. Geiger & Co. (and Washington)	67,481 80	67,481 80
J. B. Devoe.....	12,678 50	12,678 50
George Kerr.....	178,263 42	178,263 42
B. B. Redding.....	193,015 02	} 102,863 73
B. B. Redding & Co.....	12,712 44	
James Allen.....	163,356 02	81,678 00
J. O'Mera.....	92,066 68	46,033 34
Charles T. Botts.....	106,229 49	53,114 74
B. P. Avery.....	99,283 23	49,641 61
O. M. Clayes.....	173,681 83	43,420 20
D. W. Gelwicks.....	302,902 59	75,725 64
Thomas A. Springer.....	206,597 04	} 86,803 51
Grant H. Springer.....	140,617 02	
Support of State Printing Office.....	89,588 60	44,794 30
Total.....	\$2,103,691 65	

APPENDIX D.

In the following table will be found such statistics as we have been able to compile in regard to the cost of printing in other States, after writing directly to the officials of every State in the Union:

Cost of public printing, binding, etc., in various States of the Union.

STATES.	Population, 1870.	Cost of Public Printing, Binding, Etc.
Connecticut	537,454	\$27,947 12
Florida	187,748	32,000 00
Indiana*	1,680,637	25,238 20
Iowa†	1,191,792	71,991 28
Kentucky*	1,321,011	38,007 57
Maine	626,915	33,000 00
Maryland	780,894	64,436 03
Massachusetts	1,437,351	165,629 02
Michigan	1,184,059	53,582 41
Minnesota	439,706	49,366 61
Missouri	1,721,295	92,439 37
Nevada†	42,491	31,858 88
New Hampshire	318,300	13,000 00
New Jersey	906,096	113,893 34
New York	4,382,759	183,984 96
North Carolina	1,071,361	20,663 94
Ohio	2,665,260	72,015 07
Rhode Island	217,393	10,170 00
Tennessee	1,258,520	43,000 00
Texas	818,579	28,281 00
Vermont†	330,551	38,986 22
Virginia	1,225,163	25,449 92
West Virginia	442,014	27,409 96

* These Legislatures meet only once in two years, and last was a year in which the Legislatures did not meet. The figures, therefore, do not give a correct statement of the annual cost of printing, etc.

† These Legislatures meet once in two years. These figures show the expenses for two years.

SEVENTH BIENNIAL REPORT OF THE TRUSTEES

OF THE

CALIFORNIA STATE LIBRARY

FOR

THE YEARS 1875-6 AND 1876-7.

OFFICERS OF THE STATE LIBRARY.

BOARD OF TRUSTEES:

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N C. B. MOTT, JR.,-----President.
JO HAMILTON, F. W. HATCH, SEN.,
JAMES J. GREEN, JOHN W. ARMSTRONG.

ROBERT O. CRAVENS-----Librarian.
LAURA MORTON, }
JAMES E. ROBINSON, }-----Deputies.
TALBOT H. WALLIS-----Porter.

REPORT.

CALIFORNIA STATE LIBRARY, }
SACRAMENTO, August 1st, 1877. }

To His Excellency,
WILLIAM IRWIN,
Governor of California:

SIR: I have the honor to transmit herewith the Seventh Biennial Report of the Trustees of the State Library.

Very respectfully your obedient servant,

ROBERT O. CRAVENS,
Librarian, and Secretary of the Board of Trustees.

STATE LIBRARY, July, 1877.

To His Excellency,
WILLIAM IRWIN,
Governor of California:

The Trustees of the State Library respectfully present their Seventh Biennial Report.

The number of volumes in the Library, excluding duplicates, is forty-five thousand four hundred and seventy-eight (45,478); thirty-one thousand nine hundred and seventeen (31,917) are in the General Library, and thirteen thousand five hundred and sixty-one (13,561) in the Law Library.

The accessions since June thirtieth, eighteen hundred and seventy-five, have been eight thousand four hundred and seventy-four (8,474). Six thousand six hundred and fourteen (6,614) have been added to the General Library, and one thousand eight hundred and sixty (1,860) to the Law Library.

LIBRARY FUND.

The balance in the Library Fund at the date of our last report, was thirteen thousand nine hundred and forty-eight dollars and eighty-

six cents (\$13,948 86). Paid into the fund by the Secretary of State from fees of his office, twenty-four thousand one hundred and sixty-three dollars and fifteen cents (\$24,163 15), and by the Surveyor-General from fees of his office, two thousand nine hundred and eighty-two dollars and fifty-seven cents (\$2,982 57). The sum of thirty-two thousand three hundred and fifty-six dollars and seventy-five cents (\$32,356 75) has been expended for books, maps, newspapers and periodicals; three thousand three hundred and seven dollars and fifteen cents (\$3,307 15) for binding; eight hundred and twenty dollars and ninety-nine cents (\$820 99) for freight and cartage; one thousand and seventy-eight dollars and fifty-one cents (\$1,078 51) for furniture, shelving and carpet; one thousand two hundred and seventy dollars (\$1,270 00) for insurance; four hundred and twenty dollars and ten cents (\$420 10) for exchange and discount on silver coin; five hundred dollars (\$500 00) for salary of Porter; leaving the balance in the fund, one thousand three hundred and forty-one dollars and eight cents (\$1,341 08), as shown by the following exhibit:

To books-----	\$32,356 75	June 30th, 1875—By balance-----	\$13,948 86
To binding-----	3,307 15	June 30th, 1876—By fees from	
To freight, etc.-----	820 99	the Secretary of State-----	11,773 05
To furniture, carpet, etc.-----	1,078 51	June 30th, 1876—By fees from	
To insurance-----	1,270 00	the Surveyor-General-----	2,982 57
To discount on silver-----	420 10	June 30th, 1877—By fees from	
To Porter-----	500 00	the Secretary of State-----	12,390 10
To balance-----	1,341 08		
			\$41,094 58
	\$41,094 58		\$1,341 08

The Trustees with pleasure report that the Library is in a healthy and flourishing condition, steadily increasing in quantity, and improving in quality. This is evidenced by the facts herein reported, but will be rendered more apparent by an examination of its well stored shelves. The liberal provision made for its support has enabled the Trustees to add largely to its value during the last two years. The accessions since our last report are largely in excess of those of any corresponding period since the establishment of the Library.

LAW LIBRARY.

This department has received special care and attention; its completeness has attracted the attention of all who have had occasion to examine it. In a recent report of the Commissioner of Education to the Secretary of the Interior, the California State Library is referred to in the following manner: "With reference to completeness, several of the State Libraries already take high rank. In the Department of Reports, the Libraries of New York, California, Massachusetts, Pennsylvania, and Iowa are undoubtedly the most complete." Every set of American Reports, together with Digests, is complete to date, and not more than a dozen volumes are needed to complete the English, Scotch, Irish, and Canadian Reports. The matter of supplying deficiencies in statutes has engaged the attention of the Trustees, and they have been able to make nearly complete the sets of most of the younger States, and some of the older ones; but, as many of these statutes are very scarce,

the progress made towards the completion of sets must necessarily be slow and expensive. All standard text-books and treatises are procured as soon as possible after their publication, and may be found on the shelves of the Library. Many of the old text-books have been supplemented by new editions. The sum of eight thousand six hundred dollars has been expended in the Law Department during the last two years.

GENERAL LIBRARY.

This department has also received many and valuable accessions, especially upon the subjects of Political Economy, Social Science, Finance, Medicine, Engineering, Mining, Mechanics and Manufactures, American History and Biography, and the Fine Arts. Special attention has been given to the collection of works on hydraulic engineering and the construction of irrigation works. Among the works on this subject now in the Library are the following:

Smith, (Captain R. Baird), Italian Irrigation, two volumes and atlas.

Smith, (Captain R. Baird), Irrigation in the Madras Provinces, with maps and plans.

Moncrief, (Lieutenant C. C. Scott), Irrigation in Southern Europe.

Cautley, (Colonel Sir Proby T.), Report on the Ganges Canal, three volumes text and one volume plates, folio.

One of the special objects of the State Library is the collection of works on American History in general; but of all the objects for which it exists none responds so directly to the wants of the public as the collection and preservation of all the materials accessible to illustrate the history of the State, its counties, its towns, and its citizens. A complete collection of all the newspapers published in the State would be invaluable for this purpose, for in many of the towns and counties they are the only printed record of the facts of local history. It is believed that the publishers of a large proportion of the newspapers in the State would preserve and give to the State Library the file of each year, on the single condition that it should be promptly bound and made accessible to the public. We suggest that it would be useful and equitable to provide by law that each publisher sending a daily newspaper should receive a copy of the statutes and documents of the session.

CATALOGUE.

The books added to the Library since the issue of the last catalogue will aggregate over twenty thousand. The propriety of publishing a new catalogue, with these large additions incorporated, is suggested, and we recommend that the Legislature provide for having one published.

E. B. MOTT, JR.,
President of the Board of Trustees.

ROBERT O. CRAVENS, Secretary.

BOOKS RECEIVED IN EXCHANGE,

*From other States and Territories, and Countries, and as Donations
from Individuals.*

DONOR.	Title.
Alabama	Alabama Reports, Vol. 50. Session Laws, 1876-7.
Arkansas	Arkansas Reports, Vol 28. Constitution, 1874. Laws, 1874-5, 1877.
Colorado	Colorado Reports, Vol. 2.
Connecticut	Connecticut Reports, Vols. 41, 42. Colonial Records, 1744-50. Public Acts, 1876-7. Special Acts, 1876-7.
Florida	Acts, 1877. House Journal, 1877. Senate Journal, 1877.
Georgia	Georgia Reports, Vols. 51, 52, 53, 54, 55, 56. Senate Journal, 1876. House Journal, 1876. Laws, 1876.
Idaho	Revised Laws, 1874-5.
Illinois	School Report, 1873-4. Industrial Report, 1873-4. Adjutant-General's Report, 1873-4. Agricultural Report, 1874. Board of Public Charities, 1874. Attorney-General's Report, 1874. Reports to the General Assembly, 1874, 2 vols. Senate Journal, 1875. House Journal, 1875. Legislative Reports, 1875, 2 vols. Geological Survey, Vol 6, with map, 1875. State Library Catalogue, 1877.
Indiana	Geological Survey, 1875. Indiana Reports, Vols. 49, 54.
Iowa	Iowa Reports, Vols. 39, 40, 41. Laws, 1874-6. Iowa Code, 1873. Public Documents, 1874, 3 vols. Senate Journal, 1876. House Journal, 1876.
Kansas	Kansas Reports, Vols. 13, 14, 15, 16. Laws, 1866, 1877.
Kentucky	Bush's Reports, Vols. 9, 10, 11, 12.
Maine	Maine Reports, Vols. 62, 63, 64, 65. Acts and Resolves, 1875-6. Legislative Register, 1875. Documents, 1875-6. Senate Journal, 1876. House Journal, 1876. School Report, 1876. Agricultural Reports, 1875-6.
Maryland	Maryland Reports, Vols. 41, 42, 43, 44. State Library Catalogue, 1874. House Journal, 1874-5. Senate Journal, 1874-5. Laws, 1876. Documents, 1876.
Massachusetts	Massachusetts Reports, Vols. 113, 114, 115, 116, 118, 119, 120. Seventh and Eighth Reports of the Board of Health. Public Documents, 1873-4-5. Acts and Resolves, 1873-4-5-6. Census, 1875, Vol. 1.

BOOKS RECEIVED IN EXCHANGE—Continued.

DONOR.	Title.
Michigan	State Library Catalogue, 1875-6.
	State Librarian's Report, 1873-4.
	Michigan Reports, Vols. 28, 29, 30, 31, 32, 33.
	Territorial Laws, 1875.
	Railroad Reports, 1873.
Minnesota	Laws, 1874-5-6.
	Executive Documents, 1874-5.
	Senate Journal, 1875.
	House Journal, 1875.
	Minnesota Reports, Vols. 20, 21, 22.
	House Journal, 1876.
	Senate Journal, 1876.
	Executive Documents, 1875, Vols. 1, 2.
Mississippi	Mississippi Reports, Vols. 51, 52, 53.
	Laws, 1876-7.
	Senate Journal, 1876-7.
	House Journal, 1876-7.
	Official Reports, 1877.
Missouri	Missouri Reports, Vols. 57, 58, 59, 60, 61, 62, 63, 64.
	Laws, 1875.
Nebraska	Laws, 1875.
	Public Documents, 1875.
	Assembly Journal, 1875.
	Nebraska Reports, Vols. 4, 5.
Nevada	Nevada Reports, Vols. 10, 11.
	Senate Journal, Seventh Session, 1875.
	House Journal, Seventh Session, 1875.
New Hampshire	New Hampshire Reports, Vol. 54.
	Laws, 1875.
New Jersey	Vroom's Reports, Vols. 8, 9.
	C. E. Green's Reports, Vols. 10, 11.
	Laws, 1875.
	Senate Journal, 1875.
	Assembly Journal, 1875.
	Legislative Documents, 1875.
	Laws, 1876.
	Senate Journal, 1876.
	Assembly Journal, 1876.
	Legislative Documents, 1876.
New York	New York Reports, Vols. 57, 58, 59, 60, 61, 62, 63, 64.
	Hun's Reports, Vols. 3, 4, 5, 6, 7, 8, 9.
	Twenty-sixth Annual Report N. Y. State Museum, 1872.
	Eighty-sixth Annual Report Regents of the N. Y. State University.
	Regents' Report on the Boundaries of the State of New York, 1873.
	Senate Documents, 1, 2, 3, 4, 5, 1873.
	Assembly Documents, 1, 2, 3, 5, 6, 7, 9, 1873.
	Senate Journal, Ninety-seventh Session, 1874.
	Assembly Journal, Ninety-seventh Session, 1874.
	Senate Documents, 1, 2, 3, 4, 5, 6, 1874.
	Assembly Documents, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 1874.
	Trial of H. H. Prindle, 2 vols.
	Trial of George G. Barnard, 3 vols.
	Trial of George M. Curtis.
	Trial of John H. McCunn.
	Laws of New York, 1876.
	Senate and Assembly Journals, 1875.
	Senate Documents, Vols. 1, 2, 3, 5, 7, 1876.
	Assembly Documents, Vols. 1, 2, 3, 4, 5, 6, 7, 9, 10, 1876.
	Regents' Report, 1875.
	Library Report, 1875.
North Carolina	North Carolina Reports, Vols. 72, 73, 74, 75.
	Laws, 1874-5.
Ohio	Ohio State Reports, Vols. 25, 26, 27.
	House Journal, 1874.
	Senate Journal, 1874.
	Executive Documents, 1874, Parts 1 and 2.

BOOKS RECEIVED IN EXCHANGE—Continued.

DONOR.	Title.
Ohio	<p> Agricultural Reports, 1874. Railroad and Telegraph Reports, 1874. Common Schools Report, 1874. Geological Reports, 1874, Part 1, Vol. 2. Laws of Ohio, 1875. Executive Documents, Parts 1 and 2, 1875. Ohio Statistics, 1875. Auditor's Report, 1875. Railroad, etc., Reports, 1875. Agricultural Reports, 1875. House Journal, 1875. Senate Journal, 1875. Laws, 1876. </p>
Oregon	<p> Oregon Reports, Vols. 4, 5. Laws, 1876. </p>
Pennsylvania	<p> Pennsylvania State Reports, Vols. 76, 77, 78, 79, 80. Laws, 1875. Senate Journal, 1875. House Journal, 1875. Executive Documents, 1874. Legislative Documents, 1875, 3 vols. Smull's Legislative Hand-book, 1875. Report of Bureau of Statistics, 1874. Report of Board of Charities, 1874. Insurance Report, 1874. Laws, 1876. Senate Journal, 1876. House Journal, 1876. Legislative Documents, 1876, 3 vols. Executive Documents, 1875. School Reports, 1875. Insurance Reports, 1875. Smull's Legislative Hand-book, 1876. </p>
Rhode Island	<p> Acts and Resolves, May Session, 1875. Index to Acts, 1863-73. Manual, 1875-6. Supplement to General Statutes, January, 1875, to May, 1876, inclusive. Acts, 1875-6. Census, 1875. </p>
South Carolina	<p> Richardson's Reports, Vols. 4, 5. Acts and Resolves, 1875-6. House Journal, 1874-5. Senate Journal, 1874-5. House Journal, 1875-6. House Journal, 1875-6. Reports and Resolves, 1875-6. Acts, Extra Session, 1877. </p>
Tennessee	<p> House Journal, 1875. Senate Journal, 1875. Appendix, 1875. Laws, 1875. Heiskell's Reports, Vol. 8. </p>
Texas	<p> Texas Reports, Vol. 42. Laws, 1876. </p>
Vermont	<p> Compiled School Laws, 1875. Vermont Reports, 47, 48. Governor and Council, Vol. 4. Laws, 1876. Legislative Directory, 1876. Legislative Documents, 1876, Vols. 1, 2, 3. Seventeenth and Eighteenth Registration Reports. Dairyman's Association, 1876. </p>
Virginia	<p> Senate Journal and Documents, 1874-5. House Journal and Documents, 1874-5. Grattan's Reports, Vols. 24, 25. </p>
West Virginia	<p> West Virginia Reports, Vols. 6, 7, 8, 9. </p>

BOOKS RECEIVED IN EXCHANGE—Continued.

DONOR.	Title.
Wisconsin	Wisconsin Reports, 36, 37, 38, 39, 40, 41. Railroad Laws, compiled, 1876. Messages and Documents, 1876, 2 vols. Laws, 1876. Senate and Assembly Journals, 1876. Laws, 1877. Senate and Assembly Journals, 1877. Messages and Documents, 1877, 2 vols.
Wyoming	Compiled Laws, 1876. Laws, 1871-3.
United States	Patent Office Plans and Specifications, from November, 1874, to April, 1877. Report of the Commissioners of Education, 1874-5. Journals and Documents, First and Second Sessions Forty-third Congress, and First Session Forty-fourth Congress. Report on Public Libraries, Parts 1 and 2, 1876. Wheeler's Survey, West One Hundred Meridian, Vol. 5, Geology. Historical Sketch of the United States Naval Academy. Geological Reports of the United States Exploring Expedition—Santa Fé to Junction of Grand and Green Rivers. Astronomical and Meteorological Observations for 1874. Statutes at Large: First and Second Sessions Forty-fourth Congress.
San Francisco	San Francisco Municipal Reports, 1874-5, 1875-6.
San Francisco Mercantile Library Association	Supplemental Catalogue, 1874-5.
Chili	Bulletin of the International Exposition of Chili, for 1875. Official Publications and Statistics of Chili, 1876.
New South Wales	Proceedings of the Legislative Council and Assembly, 1874, and 1875-6.
Melbourne Public Library	Victoria Meteorological Observations, 1859-62. Mueller's Fragmenta Phytographie, Australia, Melbourne, 1860-74, 7 vols. Mueller's Australian Mosses, Melbourne, 1864. Mueller's Vegetation of the Chatham Islands, Melbourne, 1864. Statistical Register of Victoria. Gold Fields of Victoria, Melbourne, 1862. Hand-book of Australia, 1857. Dr. Leichardt's Travels in Australia, Melbourne, 1859. Maye's Essay on the Resources of Australia. Story's Essay on the Agriculture of Victoria. Vocabulary of Aboriginal Dialects of Australia. Acheson on the Collection and Storage of Water in Victoria. Australia at the London Exhibitions, 1862-73. Australia and the Philadelphia Exhibition, 1876. Melbourne Public Library Catalogues, 1861-65-72. Statistical Notes on the Progress of Victoria, 1835-60. Lectures before the Melbourne Technological Museum, etc., 1871. Melbourne Public Library Report, 1875. Catalogue of Oil Paintings in the Melbourne Public Library.
South Australia	South Australia Acts of Parliament, 1876.
Quebec	Statutes of Quebec, 1875. Legislative Journal, 1875.
Victoria	Astronomical Observations, 1874.
The American Swedenborg Printing and Publishing Society	The Works of Emanuel Swedenborg, complete.
Tyrrell, G. G.	Transactions of the California State Medical Society, 1876-7.
Honorable Newton Booth	Congressional Record, Second Session, Forty-third Congress.



BIENNIAL REPORT OF THE DIRECTORS
AND THE
TWENTY-FOURTH AND TWENTY-FIFTH ANNUAL REPORTS
OF THE
Superintendent of the Insane Asylum
OF
THE STATE OF CALIFORNIA,
AT STOCKTON.
1877.

OFFICERS OF THE ASYLUM.

DIRECTORS :

OBED HARVEY, M. D.,-----Galt,
President.
FRANK T. BALDWIN, ESQ.,-----Stockton,
Vice-President.
COLONEL CALEB DORSEY-----Stanislaus County.
DONALD McLENNAN, ESQ.,-----San Francisco.
HON. ROBERT WATT-----San Rafael.

TREASURER :

WILLIAM B. AUSTIN-----Stockton.

RESIDENT OFFICERS :

G. A. SHURTLEFF, M. D.,-----Superintendent.
W. T. BROWNE, M. D.,-----Assistant Physician.
W. R. LANGDON, M. D.,-----Assistant Physician.

DIRECTORS' REPORT.

INSANE ASYLUM OF THE STATE OF CALIFORNIA. }
STOCKTON, August 25th, 1877. }

To his Excellency,

WILLIAM IRWIN,

Governor of California:

SIR: In compliance with the requirements of law, as Directors of the State Asylum for the Insane, at Stockton, we hereby respectfully submit our Biennial Report for the two years ending July first, eighteen hundred and seventy-seven.

We also herewith submit for your consideration the two annual reports of the Superintendent of the Asylum, embracing the biennial period above named, and made a part of our report.

It will be seen that the per capita cost of maintenance, during the last year, notwithstanding a reduction in the number of patients, has been reduced to a minimum, as compared with all past years. The average daily cost, during the past year has been only forty-one cents per patient, and during the previous, or first year of this biennial period, it was only forty-two cents, the lowest figure ever reached at that time. It will be borne in mind that in asylum statistics the per capita expense is not estimated or computed simply on what the patients themselves eat and wear, but on the expense of carrying on the institution, including the pay and board of the physicians and all the employes, ordinary repairs, incidental expenses; in fact all the current expenses of maintaining the entire establishment.

We fully concur in the judgment of the Superintendent in his estimate of the great number of patients which will have to be provided for in this Asylum. Unless a change is wrought by some future legislation it is evident that no further reduction of its numbers can be relied on. We also, in this connection, fully indorse and recommend the improvements and modifications asked for by him. Carefully executed plans of the proposed improvements, and estimates of the cost thereof, will be made in due time for the information of the Legislature.

The report of the Treasurer is also herewith submitted as constituting a part of our own, and exhibiting the financial condition of the Asylum.

On the first of October, eighteen hundred and seventy-six, the quarterly estimates were reduced by the Superintendent and approved by this Board in the sum of two thousand five hundred dollars, which is this amount below the appropriation for the same period. And July first, eighteen hundred and seventy-seven, they

were again reduced to the extent of four thousand five hundred dollars less than the legislative appropriation per quarter. It will be seen, therefore, if no occasion arises making it necessary to increase our expenditures, there will remain undrawn of the appropriation for the support of this Asylum, for the twenty-eighth and twenty-ninth fiscal years, the sum of twenty thousand five hundred dollars. In addition to this sum, the receipts have exceeded the expenditures in the sum of ten thousand eight hundred and sixty-two dollars and eight cents for the twenty-seventh fiscal year, and in the sum of nineteen thousand six hundred and eleven dollars and nineteen cents for the twenty-eighth fiscal year.

In making estimates for the appropriation for the support of the Asylum for the thirtieth and thirty-first fiscal years it appears that not less than twelve hundred patients can be safely adopted as a basis, and that the per capita cost cannot be estimated at any less than the extremely low rate at which the institution has been maintained during the last two years. In fact, prudence requires some little margin over these figures.

For further financial details we refer you to the annexed biennial report of the Treasurer.

All which is respectfully submitted,

O. HARVEY,
FRANK T. BALDWIN,
DONALD McLENNAN,
ROBERT WATT,
CALEB DORSEY,
Directors.

TREASURER'S REPORT.

OFFICE OF THE TREASURER OF THE
INSANE ASYLUM OF CALIFORNIA,
STOCKTON, July 1st, 1877. }

To the Board of Directors of the Insane Asylum of California.

GENTLEMEN: In accordance with the by-laws of the institution, I have the honor to present the following biennial report of the receipts and disbursements of all moneys, from all sources, commencing July the first, eighteen hundred and seventy-five, and ending June thirtieth, eighteen hundred and seventy-seven:

GENERAL FUND.

RECEIPTS.

July 1, 1875, balance as per last biennial report		\$43,881 14
September 13, 1875, borrowed from the Nevada Bank, San Francisco, at one per cent. per month, on Warrant No. 99		15,000 00
October 10, 1875, borrowed from the Nevada Bank, San Francisco, at one per cent. per month, on Warrant No. 290		15,000 00
November 8, 1875, borrowed from the Nevada Bank, San Francisco, at one per cent. per month, on Warrant No. 569		15 000 00
December 9, 1875, borrowed from the Nevada Bank, San Francisco, at one per cent. per month, on Warrant No. 785		15,000 00
January 10, 1876, borrowed from the Nevada Bank, San Francisco, at one per cent. per month, on Warrant No. 936		16,000 00
February 8, 1876, Warrant No. 99	\$17,500 00	
On which was borrowed	15,000 00	
		2,500 00
February 8, 1876, Warrant 290	\$17,500 00	
On which was borrowed	15,000 00	
		2,500 00
February 8, 1876, Warrant No. 569	\$17,500 00	
On which was borrowed	15,000 00	
		2,500 00
February 8, 1876, Warrant No. 785	\$17,500 00	
On which was borrowed	15,000 00	
		2,500 00
February 8, 1876, Warrant No. 936	\$17,500 00	
On which was borrowed	16,000 00	
		1,500 00
February 8, 1876, Warrant No. 188—returned from Fund for Repairs		5,000 00
February 8, 1876, Warrant No. 199—returned from Burial-ground Fund		1,251 00
February 8, 1876, Warrant No. 1,214		17,500 00
February 8, 1876, Warrant No. 1,531		17,500 00
February 24, 1876, Warrant No. 2,077		17,500 00
April 15, 1876, Warrant No. 3,185		17,500 00
May 16, 1876, Warrant No. 4,453		17,500 00
June 14, 1876, Warrant No. 5,999		17,500 00
July 15, 1876, Warrant No. 6,341		17,500 00
Amount carried forward		\$260,132 14

Amount brought forward-----		\$260,132 14
November 10, 1876, borrowed of A. Borrell & Co., San Francisco, for 90 days, at ten per cent. per annum, on Warrant No. 313-----		15,000 00
December 8, 1876, borrowed of A. Borrell & Co., San Francisco, for 60 days, at ten per cent. per annum, on Warrant No. 871-----		15,000 00
January 10, 1877, borrowed of A. Borrell & Co., San Francisco, for 30 days, at ten per cent. per annum, on Warrant No. 872-----		15,000 00
February 9, 1877, Warrant No. 113-----		17,500 00
February 9, 1877, Warrant No. 313-----	\$17,500 00	
On which was borrowed-----	15,000 00	
		2,500 00
February 9, 1877, Warrant No. 871-----	\$17,500 00	
On which was borrowed-----	15,000 00	
		2,500 00
February 9, 1877, Warrant No. 872-----	\$16,666 66	
On which was borrowed-----	15,000 00	
		1,666 66
February 9, 1877, Warrant No. 1,084-----		16,666 67
March 23, 1877, Warrant No. 1,386-----		16,666 67
April 14, 1877, Warrant No. 1,586-----		16,666 66
May 14, 1877, Warrant No. 1,947-----		16,666 67
June 13, 1877, Warrant No. 2,452-----		16,666 67
June 13, 1877, amount received from pay-patients for board and clothing:		
For year ending June 30th, 1876-----	\$7,614 50	
For year ending June 30th, 1877-----	6,128 50	
		13,743 00
June 13, 1877, amount received from Steward's sales:		
For year ending June 30th, 1876-----	\$456 90	
For year ending June 30th, 1877-----	1,077 00	
		1,533 90
		<u>\$427,909 04</u>

DISBURSEMENTS.

Amount paid for general support, as per vouchers now on file:		
For year ending June 30th, 1876-----	\$205,922 58	
For year ending June 30th, 1877-----	189,121 92	
		\$395,044 50
Amount paid for interest:		
For year ending June 30th, 1876-----	\$2,046 75	
For year ending June 30th, 1877-----	792 06	
		2,838 81
Amount paid for freight on coin:		
For year ending June 30th, 1876-----	\$259 06	
For year ending June 30th, 1877-----	180 33	
		439 39
Amount loaned "Fund for Repairs"-----		2,303 34
Balance in General Fund-----		27,283 00
		<u>\$427,909 04</u>

I have in my possession three warrants unendorsed by the Directors, Nos. 2,453, 2,796, and 3,033, amounting to-----	\$50,000 00
---	-------------

FUND FOR REPAIRS.

RECEIPTS.

July 1, 1875, balance as per last biennial report-----	\$2,928 59
Borrowed from "General Fund"-----	2,303 34
	<u>\$5,231 93</u>

DISBURSEMENTS.

Amount disbursed, as per vouchers now on file-----	\$5,231 93
--	------------

BURIAL-GROUND FUND.

RECEIPTS.

May 16, 1876, Warrant No. 4,454-----	\$111 48
--------------------------------------	----------

DISBURSEMENTS.

Amount disbursed, as per vouchers now on file -----	\$111 48
---	----------

RECAPITULATION.

Balance in General Fund -----	\$27,283 00
Three warrants unpaid -----	50,000 00

The indebtedness of the Asylum is as follows:

General Fund -----	\$14,124 94
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All of which is respectfully submitted.

Your obedient servant,

W. B. AUSTIN, Treasurer.

SUPERINTENDENT'S REPORT—1876.

To the Directors of the Insane Asylum of the State of California at Stockton:

GENTLEMEN: In compliance with the requirements of law, as Superintendent of this Asylum, I hereby submit my Annual Report for the year ending with June thirtieth, eighteen hundred and seventy-six.

The following tabular statement will show the operations of the institution, as regards the patients, during the year:

ANNUAL SUMMARY.

FROM JUNE 30TH, 1875, TO JULY 1ST, 1876.	Males ----	Females --	Totals ----
Number of patients, July 1st, 1875 -----	922	380	1,302
Number admitted during the year ending with June 30th, 1876----	299	115	414
Number under care and treatment-----	1,221	495	1,716
Number discharged recovered-----	190	62	252
Number discharged improved-----	21	31	52
Number discharged unimproved -----	6	2	8
Number died -----	132	40	172
Number eloped -----	18	-----	18
Discharged, died, and eloped-----	367	135	502
Number of patients remaining July 1st, 1876-----	854	360	1,214

The above statement presents no unusual facts worthy of comment, or requiring explanation, except the very large ratio of recoveries to the admissions. This is owing to the uncommonly large number of recent and curable cases compared with the number of admissions. The recoveries amount to sixty per cent. of the number admitted.

The following tables will show in detail the transactions of the year:

TABLE A.

Showing the counties from which four hundred and fourteen patients were admitted from July 1st, 1875, to July 1st, 1876.

COUNTIES.	Males.	Females.	Totals.
Alameda	27	15	42
Amador	3		3
Butte	4	2	6
Calaveras	2	2	4
Colusa	1		1
El Dorado	4		4
Fresno	7		7
Humboldt	6	1	7
Inyo	4		4
Kern	5		5
Lake	1		1
Lassen		1	1
Los Angeles	4		4
Marin	1	1	2
Mariposa	3	1	4
Mendocino	5		5
Merced	8	2	10
Monterey	2		2
Napa	1	1	2
Nevada	7	3	10
Placer	3	1	4
Plumas	2	1	3
Sacramento	23	11	34
San Benito	1		1
San Bernardino	3	1	4
San Diego	4	1	5
San Francisco	64	44	108
San Joaquin	28	12	40
San Luis Obispo	1		1
San Mateo	2	1	3
Santa Barbara	3		3
Santa Clara	21	1	22
Santa Cruz	9	1	10
Shasta	3	1	4
Sierra	2	1	3
Solano	8		8
Sonoma	2		2
Stanislaus	2		2
Sutter	1		1
Tehama	3	1	4
Trinity	1		1
Tulare	4	1	5
Tuolumne	6	1	7
Ventura	4	2	6
Yolo		2	2
Yuba	4	3	7
Totals	299	115	414

TABLE B.

Showing the nativity of four hundred and fourteen patients admitted from July 1st, 1875, to July 1st, 1876.

NATIVITY.	Males	Females	Totals
<i>United States.</i>			
Alabama	1	1	2
Arkansas	1		1
California	14	6	20
Connecticut	3	1	4
Illinois	6	3	9
Indiana	3	2	5
Iowa	5		5
Kentucky	3	1	4
Louisiana	2	2	4
Maine	5	4	9
Maryland	2	1	3
Massachusetts	9	4	13
Michigan	2	1	3
Missouri	5	3	8
New Hampshire	1		1
New York	16	11	27
North Carolina	2		2
Ohio	9	1	10
Pennsylvania	5	1	6
Tennessee	3		3
Vermont	4		4
Virginia	5	2	7
Washington, D. C.	1		1
Utah Territory		1	1
United States	6	3	9
Totals	113	48	161
<i>Foreign Countries.</i>			
Australia	1		1
Belgium	3		3
Canada	5	1	6
Chili	1		1
China	17	1	18
Costa Rica	1		1
Denmark	3	1	4
England	9	3	12
France	6	2	8
Germany	22	17	39
Holland	1		1
Hungary	2		2
Ireland	51	31	82
Italy	10		10
Manilla	1		1
Mexico	7	2	9
New Brunswick		1	1
Norway	3	1	4
Portugal	3		3
Poland	1		1
Prince Edward's Island	1		1
Russia	1		1
Scotland	5		5
Spain	1		1
Sweden	6	1	7
Switzerland	5	2	7
Wales	2		2
Western Islands	1		1
Unknown	17	4	21
Totals	186	67	253

TABLE B—Continued.

NATIVITY.	Males ---	Females -	Totals ---
RECAPITULATION.			
<i>Nativity.</i>			
United States.....	113	48	161
Foreign countries.....	169	63	232
Unknown.....	17	4	21
Totals.....	299	115	414

TABLE C.

Showing the ages at which insanity first appeared in four hundred and fourteen patients admitted in the Asylum from July 1st, 1875, to July 1st, 1876.

AGES.	Males ---	Females -	Totals ---
Less than 10 years.....	6	1	7
Between 10 and 15 years.....	2	1	3
Between 15 and 20 years.....	20	15	35
Between 20 and 25 years.....	32	12	44
Between 25 and 30 years.....	43	12	55
Between 30 and 35 years.....	40	25	65
Between 35 and 40 years.....	37	13	50
Between 40 and 45 years.....	35	18	53
Between 45 and 50 years.....	22	7	29
Between 50 and 55 years.....	15	4	19
Between 55 and 60 years.....	9	1	10
Between 60 and 65 years.....	7	4	11
Between 65 and 70 years.....	3	---	3
Between 70 and 80 years.....	1	---	1
Unknown.....	27	2	29
Totals.....	299	115	414

TABLE D.

Showing the ages of four hundred and fourteen patients at the time of their admission in the Asylum from July 1st, 1875, to July 1st, 1876.

AGES.	Males ---	Females -	Totals ---
Less than 10 years.....	3	1	4
Between 10 and 15 years.....	1	1	2
Between 15 and 20 years.....	15	11	26
Between 20 and 25 years.....	31	13	44
Between 25 and 30 years.....	42	12	54
Between 30 and 35 years.....	38	15	53
Between 35 and 40 years.....	43	23	66
Between 40 and 45 years.....	35	16	51
Between 45 and 50 years.....	25	7	32
Between 50 and 55 years.....	14	6	20
Between 55 and 60 years.....	13	3	16
Carried forward.....	260	108	368

TABLE D—Continued.

AGES.	Males	Females	Totals
Brought forward	260	108	368
Between 60 and 65 years	5	4	9
Between 65 and 70 years	5	—	5
Between 70 and 80 years	2	1	3
Unknown	27	2	29
Totals	299	115	414

TABLE E.

Showing the supposed cause of insanity of four hundred and fourteen patients, as stated in commitments, from July 1st, 1875, to July 1st, 1876.

CAUSES.	Males	Females	Totals
Intemperance	22	6	28
Masturbation	27	—	27
Domestic troubles	3	5	8
Injury to head	6	1	7
Religious excitement	8	4	12
Epilepsy	10	2	12
Hereditary	10	5	15
Syphilis	2	—	2
Disappointment in love	1	1	2
Sunstroke	3	1	4
Ill health	4	2	6
Loss of property	3	4	7
Metropertinitis	—	1	1
Cerebral disease	9	1	10
Home-sickness and poverty	1	—	1
Desertion of husband and ill health	—	1	1
Business trouble	7	—	7
Opium	3	—	3
Fall from horse	1	—	1
Paralysis	4	—	4
Death of husband	—	2	2
Death of wife	1	—	1
Death of child	1	6	7
Love	1	—	1
Uterine disease	—	3	3
Neuralgia	—	1	1
Nervous debility	1	—	1
Idiocy	2	—	2
Puerperal condition	—	5	5
Hysteria	—	1	1
Hypochondria	1	—	1
Dissipation	1	1	2
Congenital defect	2	—	2
Brain fever	—	1	1
Lead poison	1	—	1
Trouble	—	1	1
Constitutional predisposition	2	—	2
Typhoid fever	1	1	2
Spiritualism	—	1	1
Old age	1	—	1
Ill treatment of husband	—	1	1
Poverty	1	—	1
Disappointment	1	1	2
Carried forward	141	59	200

TABLE E—Continued.

CAUSES.	Males ---	Females -	Totals ---
Brought forward	141	59	200
Intense mental application	1		1
Seduction and abandonment		1	1
Fear of losing estate	1		1
Exposure and want of food	1		1
Anxiety of travel		1	1
Over-exertion in the sun	1		1
Nervous excitement		1	1
Change of life		1	1
Lactation		1	1
Overwork		1	1
Erotic desire	2		2
Unknown	152	50	202
Totals	299	115	414

TABLE F.

Showing the class of insanity of four hundred and fourteen patients, at the time of their admission, from July first, 1875, to July 1st, 1876.

FORM OF DISEASE.	Males ---	Females -	Totals ---
Mania	161	75	236
Monomania	41	9	50
Melancholia	19	18	37
Dementia	75	13	88
Idiocy	3		3
Totals	299	115	414

TABLE G.

Showing the civil condition of four hundred and fourteen patients at the time of their admission, from July 1st, 1875, to July 1st, 1876.

CIVIL CONDITION.	Males ---	Females -	Totals ---
Married	77	70	147
Single	179	28	207
Widows		15	15
Widowers	10		10
Unknown	33	2	35
Totals	299	115	414

TABLE H.

Showing the occupation of four hundred and fourteen patients admitted from July 1st, 1875, to July 1st, 1876,

OCCUPATION.	Males	Females	Totals
Miners	25	—	25
Laborers	86	—	86
Farmers	25	—	25
Housewives	—	59	59
Housekeepers	—	5	5
Domestic servants	—	11	11
Shoe-cutter	1	—	1
Lawyers	2	—	2
Tradesman	1	—	1
Sheep-herders	8	—	8
Marble-cutter	1	—	1
Carpenters	9	—	9
Clerks	1	—	1
Sailors	15	—	15
Hostler	1	—	1
Painters	6	—	6
Grocer	1	—	1
Musicians	2	—	2
Prostitutes	—	2	2
Shoemakers	2	—	2
Dairywoman	—	1	1
Sheep-shearer	1	—	1
Railroad brakeman	1	—	1
Dress-makers	—	3	3
Expressman	1	—	1
Machinists	2	—	2
Watchmaker	1	—	1
Physicians	3	1	4
Tailors	2	—	2
Lumbermen	2	—	2
Cork merchant	1	—	1
Harness-makers	3	—	3
Hunter	1	—	1
Wood-cutters	2	—	2
Mechanic	1	—	1
Dairyman	1	—	1
Needlewoman	—	1	1
Dishwasher	1	—	1
Brickmaker	1	—	1
Car Conductor	1	—	1
Cabinet-makers	2	—	2
Iron-worker	1	—	1
Book-keeper	1	—	1
Music teacher	—	1	1
Laundryman	1	—	1
Teachers	3	—	3
Butchers	2	—	2
Seamstress	—	1	1
Iron moulder	1	—	1
Mining Superintendent	1	—	1
Editor	1	—	1
Waiter	1	—	1
Ministers	2	—	2
Rag-picker	1	—	1
Millers	2	—	2
Brick-moulder	1	—	1
Soap-boiler	1	—	1
Coal-burner	1	—	1
Carried forward	233	85	318

TABLE H—Continued.

OCCUPATION.	Males	Females	Totals
Brought forward	233	85	318
Cooks	3		3
Tinsmith	1		1
Blacksmiths	3		3
Merchants	2		2
Vacquero	1		1
Farm boy	1		1
Teamster	1		1
Gardener	1		1
Book canvasser		1	1
Fireman	1		1
Dyer	1		1
Boat builder	1		1
Steamboat owner	1		1
Scholars	1	2	3
Varnisher	1		1
Mendicant	1		1
None	18	15	33
Unknown	28	12	40
Totals	299	115	414

TABLE I.

Showing the cause of death of one hundred and seventy-two patients during the year, from July 1st, 1875, to July 1st, 1876.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
July, 1875	Typhomania	Missouri	35	1	
July, 1875	Anasarca	Germany	40	1	
July, 1875	Marasmus	Scotland	66	1	
July, 1875	Organic disease of brain	Germany	54		1
July, 1875	Old age	Pennsylvania	70	1	
July, 1875	Marasmus	Indiana	32	1	
July, 1875	Organic disease of brain	Massachusetts	50	1	
July, 1875	Consumption	Ireland	36	1	
July, 1875	Marasmus	Germany	44		1
July, 1875	Dysentery	Central America	48		1
July, 1875	Organic disease of brain	New York	47	1	
July, 1875	Marasmus	Ireland	50	1	
July, 1875	Consumption	Wales	39	1	
July, 1875	Consumption	Ireland	33		1
July, 1875	General paralysis	New York	45	1	
July, 1875	Marasmus	Russia	32	1	
July, 1875	Organic disease of brain	France	66	1	
July, 1875	Organic disease of brain	Germany	30	1	
July, 1875	Gastritis	Pennsylvania	30	1	
July, 1875	Organic disease of brain	China	66	1	
August, 1875	Consumption	China	25		1
August, 1875	Marasmus	Germany	18	1	
August, 1875	Marasmus	England	51		1
August, 1875	Paralysis	Scotland	59	1	
August, 1875	Tuberculosis	France	31	1	
August, 1875	Consumption	California	21	1	
August, 1875	Consumption	Canada	35	1	
August, 1875	Tuberculosis	Germany	45	1	
August, 1875	Consumption	New York	40	1	
August, 1875	Organic disease of brain	England	47	1	

TABLE I—Continued.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
August, 1875	Organic disease of brain	France	50	1	
August, 1875	Dysentery	New York	38		1
August, 1875	Abscess of lungs	Italy	Unknown	1	
September, 1875	Tuberculosis	England	50		1
September, 1875	Secondary syphilis	California	31	1	
September, 1875	Marasmus	Austria	39		1
September, 1875	Maniacal exhaustion	Sweden	41	1	
September, 1875	Disease of liver	Germany	32	1	
September, 1875	Maniacal exhaustion	Canada	40	1	
September, 1875	Suicide by hanging	Denmark	39	1	
September, 1875	Paralysis	Maryland	64		1
September, 1875	Organic disease of brain	Mexico	42		1
September, 1875	Organic disease of brain	New York	42		1
September, 1875	Cerebral effusion	America	42	1	
September, 1875	Maniacal exhaustion	Ireland	42	1	
September, 1875	Gunshot wound	Ireland	32	1	
September, 1875	Ascites	Maryland	50	1	
September, 1875	Consumption	Pennsylvania	51	1	
September, 1875	Cerebral effusion	Sweden	42	1	
September, 1875	Marasmus	England	42	1	
September, 1875	Epilepsy	California	37	1	
October, 1875	General paralysis	England	36	1	
October, 1875	Organic disease of brain	Sweden	49	1	
October, 1875	Paralysis	Canada	64		1
October, 1875	Consumption	Ireland	33		1
October, 1875	Epilepsy	Virginia	43	1	
October, 1875	Typhomonia	Missouri	45		1
October, 1875	Paralysis	New York	70	1	
October, 1875	Organic disease of brain	Sweden	45	1	
October, 1875	Marasmus	China	33	1	
October, 1875	Cerebral effusion	Unknown	Unknown	1	
October, 1875	Consumption	Unknown	Unknown		1
October, 1875	Marasmus	Unknown	Unknown	1	
October, 1875	Organic disease of brain	Norway	50	1	
October, 1875	Consumption	Austria	44	1	
October, 1875	Tuberculosis	Italy	27	1	
October, 1875	Organic disease of brain	Sweden	35	1	
October, 1875	Heart disease	Russia	46	1	
October, 1875	Epilepsy	Mississippi	48		1
October, 1875	Marasmus	Russia	58	1	
October, 1875	Marasmus	Chili	57	1	
November, 1875	Organic disease of brain	Germany	40	1	
November, 1875	Marasmus	Maine	47	1	
November, 1875	Gangrene of lungs	England	30	1	
November, 1875	Consumption	Maine	33		1
November, 1875	Consumption	China	40		1
November, 1875	Typhoid pneumonia	Missouri	34	1	
November, 1875	Tuberculosis	Ireland	36		1
November, 1875	Maniacal exhaustion	Germany	43		1
November, 1875	Paralysis	New York	70	1	
November, 1875	Tuberculosis	Italy	30	1	
November, 1875	Dropsy	Ireland	53	1	
November, 1875	Erysipelas	Ohio	40		1
November, 1875	Organic disease of brain	New York	49	1	
November, 1875	Remittent fever	Unknown	24	1	
November, 1875	Organic disease of brain	Ireland	36	1	
November, 1875	Paralysis	Germany	36	1	
November, 1875	Paralysis	England	58	1	
November, 1875	Epilepsy	Pennsylvania	44	1	
December, 1875	Epilepsy	Canada	34		1
December, 1875	Maniacal exhaustion	Mississippi	52	1	
December, 1875	Paralysis	Ireland	67	1	
December, 1875	Organic disease of brain	Ireland	31		1
December, 1875	Pneumonia	France	71	1	

TABLE I—Continued.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
December, 1875	Cerebral effusion	Germany	33	1	---
December, 1875	Maniacal exhaustion	Ireland	37	1	---
December, 1875	Organic disease of brain	Massachusetts	37	1	---
December, 1875	Organic disease of brain	Virginia	43	1	---
December, 1875	Organic disease of brain	America	47	1	---
December, 1875	Marasmus	Ireland	46	---	1
December, 1875	Dropsy	Ireland	46	---	1
December, 1875	Dropsy	California	Unknown	1	---
December, 1875	Paralysis	Canada	Unknown	1	---
January, 1876	Paralysis	Pennsylvania	46	1	---
January, 1876	Disease of liver	Virginia	47	---	1
January, 1876	Epilepsy	Unknown	46	---	1
January, 1876	Tabes mesenterica	Ireland	27	---	1
January, 1876	Paralysis	Sweden	44	1	---
January, 1876	Maniacal exhaustion	Ireland	46	---	1
January, 1876	Cerebral effusion	New York	39	1	---
January, 1876	Consumption	China	25	1	---
January, 1876	Consumption	France	55	1	---
January, 1876	Serous apoplexy	Italy	41	1	---
February, 1876	Paralysis	Scotland	44	1	---
February, 1876	Erysipelas	Unknown	Unknown	1	---
February, 1876	Tabes mesenterica	England	69	---	1
February, 1876	Organic disease of brain	Portugal	27	1	---
February, 1876	Cerebral effusion	France	28	---	1
February, 1876	Consumption	Denmark	36	1	---
February, 1876	Consumption	China	43	1	---
February, 1876	Paralysis	Kentucky	66	1	---
February, 1876	Apoplexy	England	55	---	1
February, 1876	Hæmoptysis	Canada	41	1	---
February, 1876	Consumption	Germany	39	1	---
February, 1876	Organic disease of brain	Tennessee	36	1	---
February, 1876	Decay of old age	New York	75	1	---
February, 1876	Tabes mesenterica	France	74	1	---
February, 1876	Consumption	Ireland	37	---	1
March, 1876	Cachexia sequel of typhoid fever	Norway	24	1	---
March, 1876	Consumption	New Jersey	27	---	1
March, 1876	Tuberculosis	Norway	57	1	---
March, 1876	Paralysis	Norway	60	1	---
March, 1876	Organic disease of brain	Virginia	25	1	---
March, 1876	Consumption	Canada	26	1	---
March, 1876	Apoplexy	Scotland	42	1	---
March, 1876	Decay of old age	Ireland	64	---	1
March, 1876	Paralysis	Hungary	30	1	---
March, 1876	Organic disease of brain	Ireland	52	---	1
March, 1876	Decay of old age	China	Unknown	1	---
March, 1876	Consumption	Western Islands	42	1	---
March, 1876	Cerebral effusion	Belgium	58	1	---
March, 1876	Consumption	Mexico	Unknown	---	1
March, 1876	Paralysis	France	26	1	---
March, 1876	Defective organization	California	12	1	---
March, 1876	Consumption	Ireland	46	1	---
March, 1876	Pyæmia	China	23	1	---
March, 1876	Consumption	Germany	50	1	---
March, 1876	Tuberculosis	Unknown	26	1	---
April, 1876	Cachexy	Massachusetts	42	1	---
April, 1876	Hydrops pericardii	England	36	1	---
April, 1876	Organic disease of brain	Ireland	24	1	---
April, 1876	Tuberculosis	China	Unknown	1	---
April, 1876	Cerebral effusion	Unknown	Unknown	1	---
April, 1876	Dysentery	Michigan	31	1	---
April, 1876	Anasarca	Unknown	Unknown	1	---
April, 1876	Exhaustion of acute mania	United States	45	1	---
May, 1876	Exhaustion from mania	Italy	Unknown	1	---

TABLE I—Continued.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
May, 1876	Consumption	Germany	49		1
May, 1876	Paralysis	Mexico	60	1	
May, 1876	Consumption	France	38	1	
May, 1876	Congestion of brain	France	43	1	
May, 1876	Organic disease of brain	Ireland	50	1	
May, 1876	Maniacal exhaustion	Mexico	48	1	
May, 1876	Tuberculosis	Germany	49	1	
June, 1876	Organic disease of brain	Prussia	33	1	
June, 1876	Organic disease of brain	Tennessee	34	1	
June, 1876	Tuberculosis	Ireland	32	1	
June, 1876	Tabes mesenterica	Germany	46	1	
June, 1876	Epilepsy	Canada	32	1	
June, 1876	Organic disease of brain	Germany	44	1	
June, 1876	Consumption	United States	23		1
June, 1876	Epilepsy	Massachusetts	20	1	

TABLE J.

Reecapitulation of cause of death of one hundred and seventy-two patients during the year, from July 1st, 1875, to July 1st, 1876.

CAUSE OF DEATH.	Males	Females	Totals
Organic disease of brain	26	5	31
Consumption	17	11	28
Marasmus	12	6	18
Paralysis	15	2	17
Tuberculosis	9	2	11
Maniacal Exhaustion	8	2	10
Cerebral Effusion	7	1	8
Dropsy	5	1	6
Epilepsy	5	3	8
Old age	3	1	4
Apoplexy	2	1	3
General Paralysis	2		2
All other causes	21	5	26
Totals	132	40	172

TABLE FIRST.

Account of articles consumed and current expenditures in the Asylum for the year ending June 30th, 1876.

ARTICLES.	Value.
Flour	\$13,262 89
Meat	15,558 86
Sugar	6,350 51
Tea	1,801 04
Syrup	1,439 42
Potatoes	6,043 73
Butter	6,731 33
Amount carried forward	\$51,187 78

TABLE FIRST—Continued.

ARTICLES.	Value.
Amount brought forward	\$51,187 78
Coffee	2,305 20
Lard	756 25
Fish	1,169 64
Poultry and eggs	562 33
Beans and peas	685 06
Rice and cracked wheat	708 58
Corn meal and middlings	614 02
Fruit	1,138 45
Vegetables	232 30
Salt	184 61
Vinegar	200 50
Small groceries	1,813 55
Soap and potash	1,184 16
Drugs	2,600 76
Liquor	1,091 25
Tobacco	2,277 30
Dry goods	2,331 07
Clothing and hats	8,852 42
Shoes and leather	2,872 66
Blankets	3,350 34
Furniture and crockery	1,399 13
Hardware and tinware	1,895 52
Grain and feed	2,128 57
Garden tools and seed	249 89
Improvements	111 00
Lumber	1,556 80
Paints, oil, and glass	488 36
Building material, and repairs	4,134 68
Brooms and brushes	656 20
Books and stationery	599 95
Oil and gas	2,418 50
Fuel	18,610 93
Bedding	2,956 89
Castings, pipes, and iron	907 55
Discharged patients	813 50
Returned escapes	412 25
Pay-roll and wages	72,906 38
Miscellaneous	2,552 62
Total	\$200,916 95

TABLE SECOND.

Showing the cost of the different Departments for the year ending June 30th, 1876.

DEPARTMENTS.	Cost.
Male kitchen and dining-room	\$32,642 82
Male department	58,409 74
Female kitchen and dining-room	21,202 77
Female department	32,953 94
Bakery	13,600 33
Laundry and engine house	4,942 72
Farm, garden, and dairy	7,325 07
Repairs and improvements	6,635 64
Medical Superintendent	5,174 03
First Assistant Physician	4,300 05
Second Assistant Physician	4,300 05
Miscellaneous	9,429 79
Total	\$200,916 95

TABLE THIRD.

Averages.

MONTHS.	Average number of patients on hand daily-	Average daily expenses--	Average cost per capita per day (cents)-----	Average cost per capita per month-----
July, 1875-----	1,320	\$516 26	39	\$12 12
August, 1875-----	1,335	530 40	40	12 31
September, 1875-----	1,348	571 03	44	13 37
October, 1875-----	1,356	600 03	44	13 70
November, 1875-----	1,351	625 71	46	13 88
December, 1875-----	1,331	587 63	44	13 70
January, 1876-----	1,313	593 48	45	14 02
February, 1876-----	1,293	537 70	41	12 06
March, 1876-----	1,272	508 63	40	12 40
April, 1876-----	1,258	576 02	46	13 72
May, 1876-----	1,241	487 91	40	12 10
June, 1876-----	1,220	452 53	37	11 12
Yearly average-----	1,306	\$548 95	42	\$12 82

TABLE FOURTH.

Products of the Farm, Garden, and Dairy for the year ending June 30th, 1876.

ARTICLES.	Amount.
Beets, pounds-----	33,109
Tomatoes, pounds-----	16,048
Turnips and carrots, pounds-----	42,534
Pumpkins and squashes, pounds-----	45,822
Beans and peas, pounds-----	2,862
Other vegetables, pounds-----	900
Other vegetables, bunches-----	4,161
Corn and cucumbers, dozens-----	4,189
Cabbage, pounds-----	36,608
Onions, pounds-----	7,383
Lettuce and cauliflower, dozens-----	1,219
Peppers and okra, pounds-----	4,102
Apples, pears and apricots, pounds-----	1,370
Grapes, pounds-----	10,412
Hay, tons-----	165
Fodder, tons-----	19
Veal, pounds-----	123
Pork, pounds-----	17,567
Milk, gallons-----	9,885
Eggs, dozens-----	315
Chickens, number-----	73
Swine, number (sold)-----	21
Cows, number (sold)-----	2
Calf, number (sold)-----	1

HISTORY OF THE ASYLUM.

This being the centennial year of our national existence, and hence employed by recommendation and common practice in historical reviews and records of the past, I herewith present, in addition to the usual annual statements, a full and detailed history of the institution from its beginning to the present time.

Twelve years ago I undertook the task of collating and tabulating the general statistics of the Asylum from its opening, with regard to the patients. I then found, to my great embarrassment, that the records of the institution did not furnish the data for the completion of the desired work. The deficiencies were supplied only by recourse to the appendices to the legislative journals, to contemporaneous newspapers, and personal knowledge. From such sources the tables were completed with tolerable accuracy, and they have since been continued from year to year with mathematical exactness. Much valuable information was thereby rescued from irretrievable loss. The following history of the dates and cost of the numerous improvements and additions to the Asylum, and other events connected therewith, I found, likewise, could only be obtained from various sources. They are here brought together in a form which will secure preservation and accessibility.

As the whole, in its present vast dimensions—it being the largest State institution of the kind on the American continent—has in a great measure grown out of additions made from time to time from imperative necessity, the dates and records of expenditures, with regard to its several parts, are of great value for future reference.

The State Asylum for the Insane, situated at Stockton, had its initiation in the State General Hospital, established at that place in eighteen hundred and fifty-one. This hospital commenced its operations in the heart of the city, in cheap wooden buildings rented temporarily for the purpose, on the corner of El Dorado and Market Streets. It was opened for the reception of patients in August, eighteen hundred and fifty-one.

In eighteen hundred and fifty-three the General Hospital was abolished by Act of Legislature, and the Insane Asylum of California was permanently established at Stockton. By this Act the buildings and appurtenances were dedicated to the care of the insane exclusively, and the institution became solely an hospital for the insane, July first, eighteen hundred and fifty-three.

BUILDINGS AND IMPROVEMENTS.

In eighteen hundred and fifty-three the brick building, known now as the "old wing" or the south wing of the present chief structure for the male patients, was built at an approximate cost of thirty-three thousand dollars.

In eighteen hundred and fifty-four the main or centre building of the male department was erected, for which the Legislature of that year appropriated eighty thousand dollars, and the building was finished for that sum.

In eighteen hundred and fifty-five the kitchen, dining-room and other improvements were constructed at a cost of fifteen thousand dollars.

In eighteen hundred and fifty-six and eighteen hundred and fifty-seven the north wing, completing the design of the present principal structure of the male department, was erected, the appropriation thereto being forty thousand dollars. Some time after, contracts were awarded for the erection of this building, and when the work was commenced the decision of the Supreme Court was made declaring the State debt above a certain sum specified in the Constitution—which amount had been already far exceeded—unconstitutional and illegal. This decision rendered the appropriation unavailable, pending contracts based thereon and in the midst of work for which it was designed to pay. The losses and extra expenditures incurred thereby by the contractors were met by the passage of relief bills in eighteen hundred and fifty-seven and eighteen hundred and fifty-nine, amounting to about eight thousand six hundred dollars, thus making the nominal cost of the north wing forty-eight thousand six hundred dollars.

In eighteen hundred and fifty-seven the present brick residence of the Medical Superintendent was erected, the appropriation for which was four thousand five hundred dollars. Subsequent additions have been made thereto, making the approximate cost seven thousand five hundred dollars.

In eighteen hundred and fifty-eight the two strong wards, under the antiquated and harsh appellation of "Mad Houses," or "Cells," were constructed; also, the grounds in the rear of the principal buildings were enclosed by high brick walls, making the airing courts; and other valuable improvements, including the frame tower and water tank, were made, all of which were specifically authorized by the Legislature of eighteen hundred and fifty-eight, and for which a special appropriation of forty thousand dollars was made and expended.

In eighteen hundred and sixty-three, the institution having become full and crowded, a special tax was levied for "the erection of additional buildings, yards, and other improvements," which continued at the rate of five cents on each one hundred dollars for two years—eighteen hundred and sixty-three and eighteen hundred and sixty-four. From the funds derived from this tax were erected, in eighteen hundred and sixty-three, the large second story of brick over the dining-room and kitchen, known as the "Sixth Ward," the brick building designated as the "Upper Tenth Ward," additional airing courts in connection with the old asylum building, and wooden outbuildings; out of this fund also were purchased the two blocks of land adjoining the one on which stands the old asylum building—one block east and one block west thereof. About sixty-one thousand dollars were expended in connection with the present male department.

It was from this fund that the commodious new building for the accommodation of the female patients was commenced, and the first part, or the transverse section of the south wing, including engine-house, stack, and temporary kitchen, was finished at a cost of sixty-six thousand eight hundred and eighty-five dollars and thirty-four cents. This part of the present new building was opened and one hundred and twenty-five female patients were transferred thereto October first, eighteen hundred and sixty-five, leaving about forty-five still in one of the additions to the old building, and emptying the entire north wing of the old building, to be occupied by male patients.

In the spring of eighteen hundred and sixty-seven the front, or longitudinal section of the south wing was finished, completing the entire wing. The forty-five patients remaining in the old building were transferred to this new structure June twenty-third, eighteen hundred and sixty-seven, leaving the old building and its dependent additions to be henceforth occupied exclusively by the males. This section of the new building cost forty thousand four hundred dollars.

In eighteen hundred and sixty-eight the centre building and centre wing were completed at a cost of sixty-two thousand seven hundred and fourteen dollars and sixty-six cents.

In eighteen hundred and sixty-nine the male department again becoming excessively crowded, the row of wooden buildings called the "Cottage Ward" was completed and occupied, accommodating one hundred and sixty patients. It cost about fifteen thousand dollars.

September twelfth, eighteen hundred and seventy, the wooden building used as a laundry and engine house was destroyed by fire.

In eighteen hundred and seventy-one and eighteen hundred and seventy-two a spacious brick building, designed for an engine house, laundry, workshop, and also for sleeping accommodations in the upper stories for employes and a harmless class of patients, was constructed at a cost of about thirty-three thousand dollars, and has been in use for the above-named purposes since its completion in eighteen hundred and seventy-two.

As provided for by Act of the nineteenth session of the Legislature, the north wing of the building occupied by the female patients was completed in eighteen hundred and seventy-four, at a cost of seventy-nine thousand five hundred dollars.

This section of the female asylum was opened July first, eighteen hundred and seventy-four, and its construction completed the entire structure on the plan originally adopted, at an aggregate cost of two hundred and forty-nine thousand five hundred dollars. It will comfortably accommodate three hundred and twenty-five patients.

During eighteen hundred and seventy-five the asylum property was enclosed with a substantial and comely fence, with appropriate gateways. The whole length of fence is nine thousand one hundred and forty-nine feet, and it cost, including the gates, curved flanks corresponding with width of streets at the three entrances, and two coats of paint over the entire fence, fourteen thousand seven hundred and eighty dollars.

In January, eighteen hundred and seventy-five, a new cemetery was purchased for the use of the Asylum. It contains about fourteen acres, is situated west of and adjoining the "Stockton Rural Cemetery," and cost two thousand seven hundred and fifty-one dollars.

The Asylum grounds proper contain one hundred and seven acres, or thirty-six blocks with the inter-current streets on the plan of the city survey. The land was nearly all donated to the State by Captain C. M. Weber, when the Asylum was permanently located at Stockton in eighteen hundred and fifty-three.

HISTORY OF INSANITY IN CALIFORNIA.

During the year eighteen hundred and fifty, there were fourteen insane persons sent to the Station House in San Francisco. It is esti-

mated that at the close of the year the whole number of the insane was twenty-two. They were accommodated in San Francisco. Some received care and medical treatment in the State Marine Hospital, and others were temporarily secured on the old prison brig "Euphemia."

In eighteen hundred and fifty-one, the State hospitals at Sacramento and Stockton afforded accommodations for the insane. During the year (eighteen hundred and fifty-one), the hospital at Sacramento received thirty-four and the one at Stockton thirteen, making the whole number forty-seven.

In eighteen hundred and fifty-two the Legislature ordered all the insane to be sent to Stockton and placed in the Stockton Hospital. During this year one hundred and twenty-four patients were admitted into the Insane Department of the State General Hospital, including those transferred from receptacles in San Francisco and Sacramento.

In eighteen hundred and fifty-three, as has already been stated, the Legislature abolished the State Hospital at Stockton and created in its stead the "*Insane Asylum of California*." All the sane patients were removed July first, eighteen hundred and fifty-three; and this date, therefore, properly stands as that of the opening of the Insane Asylum.

On the eighth day of October, eighteen hundred and fifty-three, the patients were removed from rented quarters, on the corner of El Dorado and Market Streets, to the then new Asylum building, now the south wing of the old building.

The following table is a complete history of the movement of patients in the institution (including the Insane Department of the General Hospital,) during more than a quarter century:

NUMBER OF ADMISSIONS, RECOVERIES, DEATHS, ETC.

YEARS.	Admissions	Recoveries	Discharged Un cured	Deaths	Escaped	Number Resident at the Close of Each Year	Increase	Decrease	Whole Number Treated	Per cent. of Recoveries to Admissions	Per cent. of Deaths on the Number Treated
1851	13	6		1		6	6		13	46.15	7.69
1852	124	50	6	10		62	56		130	40.32	7.69
1853	160	108	8	12		103	41		222	67.50	5.40
1854	202	150	13	21		134	31		305	74.00	6.89
1855	214	168	16	18		162	28		348	78.50	5.20
1856	210	126	15	23		172	10		382	60.00	6.02
1857	206	81	17	28		188	16		378	39.32	7.33
1858	244	112	20	32		273	85		432	45.90	7.41
1859	276	112	22	49		370	97		549	40.58	8.91
1860	248	123	21	54	10	417	47		618	49.59	8.73
1861	198	154	34	33	14	416		1	615	77.77	5.36
1862	301	127	14	65	12	499	83		717	42.19	9.06
1863	252	105	17	47	12	583	84		751	41.67	6.26
1864	219	101	25	82	12	581		2	802	46.12	10.22
1865	268	93	15	82	27	632	51		849	34.70	9.66
1866	279	131	13	62	12	693	61		911	46.95	6.81
1867	313	125	14	89	9	769	76		1,006	40.00	8.80
1868	387	146	13	134	10	853	84		1,156	37.73	11.59
1869	482	225	16	159	15	920	67		1,335	46.68	11.91
1870	562	221	36	156	22	1,047	127		1,482	39.32	10.55
1871	523	245	36	176	23	1,090	43		1,570	46.84	11.21
1872	506	240	33	188	12	1,123	33		1,596	47.43	11.78
1873	401	185	19	152	12	1,156	33		1,524	46.13	9.97
1874	524	209	46	178	23	1,224	68		1,680	39.88	10.59
1875	615	259	71	181	26	1,302	78		1,839	41.95	9.84
1876	414	252	60	172	18	1,214		88	1,716	61.26	10.03
Totals	8,141	3,854	600	2,204	269		1,305	91			

The greatest number of patients ever received into the Asylum in one year was in the year ending June thirtieth, eighteen hundred and seventy-five, when six hundred and fifteen were admitted.

The greatest number ever received in one month was sixty-seven, in the month of July, eighteen hundred and seventy-five.

The greatest number of patients at one time was thirteen hundred and sixty-one, on the twenty-ninth day of October, eighteen hundred and seventy-five, there then being nine hundred and fifty-two males and four hundred and nine females.

Since November fifteenth, eighteen hundred and seventy-five, when the Napa Asylum was opened, the number in the Asylum at Stockton has diminished.

In grateful acknowledgment of the support the executive management of the institution has received through your wise counsel and faithful supervision, the foregoing report is respectfully submitted.

G. A. SHURTLEFF,
Medical Superintendent.

Insane Asylum of California, Stockton, July 1st, 1876.

SUPERINTENDENT'S REPORT—1877.

To the Directors of the Insane Asylum of the State of California at Stockton :

GENTLEMEN: The Superintendent of the institution of which you are the general managers hereby submits his twenty-fifth annual report, it being for the year ending with June thirtieth, eighteen hundred and seventy-seven.

It will be borne in mind that the Superintendent is required to report annually, while the Directors, under the present law, report biennially. Hence there are two of the Superintendent's reports embraced in the biennial period covered by the Directors' Report. These reports are only published once in two years—the period of the meeting of the Legislature, whose sessions are biennial. This explanation is made for the information of the executive officers of public institutions to whom the reports of this are supplied in exchange, and of others who thoughtlessly or in the absence of information on this point, look and apply for them in and for the year in which they are not printed and published.

ANNUAL SUMMARY.

The following summary exhibits the number of patients in the Asylum July first, eighteen hundred and seventy-six, the number of admissions, discharges, deaths, and elopements during the year, and the number remaining in the Asylum July first, eighteen hundred and seventy-seven :

FROM JUNE 30TH, 1876. TO JULY 1ST, 1877.			
	Males	Females	Totals
Number of patients July 1st, 1876.....	854	360	1,214
Number admitted during the year ending June 30th, 1877.....	152	49	201
Number under care and treatment.....	1,006	409	1,415
Number discharged recovered.....	64	19	83
Number discharged improved.....	18	11	29
Number discharged unimproved.....	1	—	1
Number died.....	81	19	100
Number eloped.....	7	—	7
Discharged, died, and eloped.....	171	49	220
Number of patients remaining July 1st, 1877.....	835	360	1,195

An analysis of the foregoing summary of the operations of the institution for the past year, as regards the movement of patients, shows that two hundred and one patients were received, and that the whole number under treatment was fourteen hundred and fifteen. Of these eighty-three recovered and were discharged, twenty-nine were discharged improved, and one hundred died. This shows a ratio of recoveries to the admissions of forty-one and twenty-nine one-hundredths per cent., and a ratio of discharges of recovered and improved patients of over fifty per cent. on the admissions. These results are as favorable as could be expected; and when taking into consideration the number of incurable cases sent from county infirmaries they are really highly satisfactory, and in excess of what would be anticipated by the alienist-statistician acquainted with the circumstances. During the past year the general physical condition of the inmates has been good. No endemic sickness has existed, and the death rate has been unusually low. The diseases and causes of death have been such as unavoidably appertain to an institution of this kind.

PRINCIPAL CAUSES OF DEATH.

The following will show conspicuously the leading causes of death of the one hundred patients who have died in the Asylum during the year:

Consumption	24
Organic disease of brain	13
Paralysis	12
Epilepsy	9
	58
All other causes	42
	100

The above were the causes of more than one-half the deaths, not over four deaths occurring from any other one cause.

A full list of the causes of death will be found in another table, for each month, in the order of the date of their occurrence.

The following table shows the counties from which the patients, during the past year, have been sent. It will be seen that they have been committed from thirty-one of the fifty-two counties. Sacramento and San Joaquin have sent the largest number—the former on account of its comparatively larger population, and also from the peculiar position of Sacramento City in relation to travel, and the latter from the location of the Asylum in this county, patients sometimes being brought to the Asylum without commitment, and then examined and committed at Stockton, the county seat of San Joaquin County.

TABLE A.

Showing the counties from which two hundred and one patients were admitted from July 1st, 1876, to July 1st, 1877.

COUNTIES.	Males	Females	Totals
Alameda	6	3	9
Alpine	1		1
Amador	8	2	10
Butte	6	2	8
Calaveras	3		3
El Dorado	1		1
Fresno	2		2
Kern	3		3
Mariposa	5		5
Merced	4	1	5
Nevada		1	1
Placer	3	1	4
Plumas	1		1
Inyo	1		1
Sacramento	25	13	38
San Bernardino	1	1	2
San Benito	3	1	4
San Diego	1		1
San Francisco	2	2	4
San Joaquin	24	14	38
San Luis Obispo	1		1
Santa Clara	23	1	24
Santa Cruz	6		6
Shasta	3		3
Sierra	2		2
Stanislaus	2		2
Tehama	2		2
Trinity	1		1
Tulare	3	1	4
Tuolumne	4	5	9
Yuba	5	1	6
Totals	152	49	201

The tables of the nativities of the patients in this institution are always peculiar for their cosmopolitan feature. Taking them altogether, hardly a State or country is unrepresented. In the comparatively small number of admissions during the past year, twenty-four States and twenty-one foreign countries are represented. As regards those born in the United States, there is nothing in these statistics by which the inference may be drawn that the people of one section of the Union are more disposed to insanity than those of another.

Of those of foreign birth, the Irish take the lead as usual, and the natives of Germany present the next highest figures. In reading this table, however, as well as others, it must be borne in mind that the number of the insane is in proportion to the number of the general population, and that the Irish and Germans are by far the most numerous of our foreign born inhabitants.

In apparent contradiction of this law, however, it will be seen that the admissions of patients of foreign birth exceed in number those of persons who were born in the United States. This is owing to the fact that hereditary predisposition to insanity is more common and stronger in an old, homogeneous population than in a new

one, springing from fresh and diverse sources—in the population of European countries than in the population of the United States; while, on the other hand, the exciting causes which serve to develop the disease, and suddenly and rapidly in proportion to their intensity, are much more numerous and active in the United States, especially in California, than in the staid and uniform condition of European society. The changes, too, which the foreign immigrant undergoes in the mode of life, circumstances, and surroundings, in changing hemispheres, constitute an efficient and prolific cause of mental disorder.

TABLE B.

Showing the nativity of two hundred and one patients, from July 1st, 1876, to July 1st, 1877.

NATIVITY.	Males	Females	Totals
<i>United States.</i>			
Alabama	3	—	3
Arkansas	1	—	1
California	4	1	5
Connecticut	3	1	4
Georgia	—	1	1
Illinois	2	2	4
Indiana	2	1	3
Kentucky	3	1	4
Maine	5	—	5
Massachusetts	5	1	6
Maryland	1	—	1
Michigan	1	1	2
Missouri	5	2	7
New York	9	4	13
Nevada	1	—	1
Ohio	6	2	8
Oregon	1	—	1
Pennsylvania	3	1	4
Tennessee	4	—	4
Texas	1	—	1
Virginia	2	—	2
Wisconsin	2	2	4
New Mexico	1	—	1
District Columbia	—	1	1
United States	2	—	2
Totals	67	21	88
<i>Foreign Countries.</i>			
China	8	1	9
Chili	1	—	1
Denmark	1	—	1
England	3	2	5
France	6	—	6
Germany	18	5	23
Hungary	1	—	1
Ireland	22	12	34
Italy	3	1	4
Mexico	6	1	7
New Brunswick	—	1	1
Norway	1	—	1
Peru	1	—	1
Portugal	1	—	1
Prince Edward's Island	1	—	1
Carried forward	73	23	96

TABLE B—Continued.

NATIVITY.	Males	Females	Totals
Brought forward.....*	73	23	96
Prussia.....	1		1
Scotland.....		1	1
Switzerland.....	3		3
Sweden.....	2		2
Wales.....	1		1
Western Islands.....	1		1
Unknown.....	4	4	8
Totals.....	85	28	113
RECAPITULATION.			
United States.....	67	21	88
Foreign countries.....	81	24	105
Unknown.....	4	4	8
Totals.....	152	49	201

GENERAL STATISTICS.

The following table, which is necessarily prepared annually, in order to prevent any interruption in this convenient and comprehensive view of the movement of the patients, presents the whole number of admissions, recoveries, deaths, the number resident at the close of each year, annual increase and decrease, ratio of recoveries and deaths, from the opening of the institution to July first, eighteen hundred and seventy-seven.

I have to repeat that the Asylum was opened exclusively for the care of the insane, July first, eighteen hundred and fifty-three; but prior to that time the insane of California were all kept here in what was then called the Insane Department of the General Hospital, and that period is embraced in the tabular statement:

NUMBER OF ADMISSIONS, RECOVERIES, DEATHS, ETC.

YEARS.	Admissions	Recoveries	Discharged Untraced	Deaths	Escaped	Number Resident at the Close of Each Year	Increase	Decrease	Whole Number Treated	Per cent. of Recoveries to Admissions	Per cent. of Deaths on the Number Treated
1851	13	6		1		6	6		13	46.15	7.69
1852	124	50	6	10		62	56		130	40.32	7.69
1853	160	108	8	12		103	41		222	67.50	5.40
1854	202	150	13	21		134	31		305	74.00	6.89
1855	214	168	16	18		162	28		348	78.50	5.20
1856	210	126	15	23		172	10		382	60.00	6.02
1857	206	81	17	28		188	16		378	39.32	7.33
1858	244	112	20	32		273	85		432	45.90	7.41
1859	276	112	22	49		370	97		549	40.58	8.91
1860	248	123	21	54	10	417	47		618	49.59	8.73
1861	198	154	34	33	14	416		1	615	77.77	5.36
1862	301	127	14	65	12	499	83		717	42.19	9.06
1863	252	105	17	47	12	583	84		751	41.67	6.26
1864	219	101	25	82	12	581		2	802	46.12	10.22
1865	268	93	15	82	27	632	51		849	34.70	9.66
1866	279	131	13	62	12	693	61		911	46.95	6.81
1867	313	125	14	89	9	769	76		1,006	40.00	8.80
1868	387	146	13	134	10	853	84		1,156	37.73	11.59
1869	482	225	16	159	15	920	67		1,335	46.68	11.91
1870	562	221	36	156	22	1,047	127		1,482	39.32	10.55
1871	523	245	36	176	23	1,090	43		1,570	46.84	11.21
1872	506	240	33	188	12	1,123	33		1,596	47.43	11.78
1873	401	185	19	152	12	1,156	33		1,524	46.13	9.97
1874	524	209	46	178	23	1,224	68		1,680	39.88	10.59
1875	615	259	71	181	26	1,302	78		1,839	41.95	9.84
1876	414	252	60	172	18	1,214		88	1,716	61.26	10.03
1877	201	83	30	100	7	1,195		19	1,415	41.29	7.06
Totals	8,342	3,937	630	2,304	276		1,305	110			

An analysis of these statistics shows that eight thousand three hundred and forty-two patients have been admitted into the Asylum, of whom three thousand nine hundred and thirty-seven have recovered and been discharged, six hundred and thirty have improved sufficiently to be discharged or have been removed, two thousand three hundred and four have died, and two hundred and seventy-six have successfully made their escape. The recoveries average over forty-seven per cent. of the whole number admitted. It will also be seen that the year ends with only nineteen patients less than the number with which it commenced, and the prospect of reducing the still crowded condition of the Asylum is not encouraged much by the last year's experience. The recoveries during the last year have been below the average on account of the great proportion of chronic and incurable cases received; but, for the two years embraced in your report, the average is greater than the general average of recoveries.

TABLE C.

Showing the ages at which insanity first appeared in two hundred and one patients admitted in the Asylum, from July 1st, 1876, to July 1st, 1877.

AGES.	Males	Females	Totals
Less than 10 years	1	2	3
Between 10 and 15 years	3	3	3
Between 15 and 20 years	6	3	9
Between 20 and 25 years	19	5	24
Between 25 and 30 years	25	9	34
Between 30 and 35 years	26	7	33
Between 35 and 40 years	15	13	28
Between 40 and 45 years	21	5	26
Between 45 and 50 years	14	1	15
Between 50 and 55 years	6	—	6
Between 55 and 60 years	6	1	7
Between 60 and 65 years	3	1	4
Between 65 and 70 years	2	1	3
Between 70 and 75 years	2	—	2
Unknown	3	1	4
Totals	152	49	201

TABLE D.

Showing the ages of two hundred and one patients at the time of their admission in the Asylum, from July 1st, 1876, to July 1st, 1877.

AGES.	Males	Females	Totals
Between 15 and 20 years	3	1	4
Between 20 and 25 years	14	2	16
Between 25 and 30 years	23	9	32
Between 30 and 35 years	21	6	27
Between 35 and 40 years	17	11	28
Between 40 and 45 years	20	12	32
Between 45 and 50 years	20	2	22
Between 50 and 55 years	11	2	13
Between 55 and 60 years	9	—	9
Between 60 and 65 years	4	1	5
Between 65 and 70 years	3	2	5
Between 70 and 75 years	2	—	2
Between 75 and 80 years	2	—	2
Unknown	3	1	4
Totals	152	49	201

TABLE E.

Showing the supposed cause of insanity in two hundred and one patients, as stated in commitments, from July 1st, 1876, to July 1st, 1877.

SUPPOSED CAUSES.	Males	Females	Totals
Intemperance	15	6	21
Epilepsy	4	3	7
Fever	1	1	2
Puerperal state		7	7
Irregular habits	2		2
Congenital	2		2
Injury to head	7		7
Disease of lungs	1		1
Genetal weakness	1		1
Sunstroke	3		3
Some lesion of brain	1		1
Hereditary	7	7	14
Loss of wife	1		1
Masturbation	14	1	15
Fear	1		1
Disappointment in love	1	1	2
Syphilis	2		2
Cerebral disease	3		3
Death of father	1		1
Meningitis	1		1
Absinthism	1		1
Senile decay	3		3
Exposure	1		1
Loss of property	6		6
Spiritualism	1		1
Excess of venery	1		1
Ill health	2		2
Religious excitement	2	2	4
Softening of brain		1	1
Erysipelas in head		1	1
Domestic trouble		1	1
Overwork	2		2
Obstruction of bowels	1		1
Pott's disease of spine	1		1
Lonely life of mining	1		1
Exhaustion		1	1
Use of opium and tobacco	1		1
Desertion of lover		1	1
Unknown	61	16	77
Totals	152	49	201

TABLE F.

Showing the class of insanity of two hundred and one patients, at the time of their admission, from July 1st, 1876, to July 1st, 1877.

FORM OF DISEASE.	Males	Females	Totals
Mania	63	26	89
Monomania	24	7	31
Melancholia	17	6	23
Dementia	48	10	58
Totals	152	49	201

TABLE G.

Showing the civil condition of two hundred and one patients, at the time of their admission, from July 1st, 1876, to July 1st, 1877

CIVIL CONDITION.	Males	Females	Totals
Married	34	30	64
Single	108	13	121
Widows		4	4
Widowers	5		5
Unknown	5	2	7
Totals	152	49	201

TABLE H.

Showing the occupation of two hundred and one patients admitted from July 1st, 1876, to July 1st, 1877.

OCCUPATION.	Males	Females	Totals
Miners	24		24
Farmers	19		19
Laborers	48		48
Housewives		22	22
Servants		4	4
Sailor	1		1
Soldier	1		1
Cooks	2		2
Clerks	2		2
Carpenters	3		3
Cooper	1		1
Tailor	1		1
Sheep-herders	3		3
May, 1876	2		9
May, 1877	1		1
May, 1878	1		1
Blacksmiths	2		2
Tinsmith	1		1
Saloon-keeper	1		1
Printer	1		1
Painters	3		3
Herdsmen	2		2
Teamsters	3		3
Wagon maker	1		1
Fisherman	1		1
Physician	1		1
Marble cutter	1		1
Lumbermen	2		2
Music teacher		1	1
Cigar makers	2		2
Nail maker	1		1
Prostitutes		3	3
Plasterer	1		1
Journalist	1		1
Wood-chopper	1		1
Braider of straw	1		1
Dressmakers		2	2
Foundryman	1		1
Carried forward	136	32	168

TABLE H—Continued.

OCCUPATION.	Males	Females	Totals
Brought forward	136	32	168
Mining superintendent	1		1
Waiter	1		1
Housekeepers		3	3
Artist	1		1
Trader	1		1
No occupation	6	10	16
Unknown	6	4	10
Totals	152	49	201

TABLE I.

Showing the cause of death of one hundred patients during the year, from July 1st, 1876, to July 1st, 1877.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
July, 1876	Consumption	Mexico	28	1	
July, 1876	General paralysis	Maryland	56	1	
July, 1876	Disease of heart	Wisconsin	16	1	
July, 1876	Apoplexy	Ionian Isles	44	1	
July, 1876	Consumption	Ireland	34		1
July, 1876	Organic disease of brain	Ireland	61	1	
August, 1876	Gastroenteritis	North Carolina	33	1	
August, 1876	Old age	Ireland	76		1
August, 1876	Consumption	China	Unknown	1	
August, 1876	Epilepsy	Massachusetts	64	1	
August, 1876	Tabes mesenterica	Georgia	49		1
August, 1876	Decay of old age	Germany	77	1	
August, 1876	Epilepsy	Illinois	24	1	
August, 1876	Epileptic fit	Alsace	41	1	
August, 1876	Consumption	Western Isles	35	359	90
August, 1876	Tuberculosis	Scotland	65	2,277	26
August, 1876	Pneumonia	Ireland	Unknown	1	
August, 1876	Puerperal mania	Indiana	22		1
September, 1876	Disease of brain	Switzerland	46	1	
September, 1876	Consumption	Manilla	55	1	
September, 1876	Suicide	Italy	26	1	
September, 1876	Epilepsy	Missouri	46	1	
September, 1876	Cancer	Kentucky	64	1	
October, 1876	Decay of old age	Scotland	63		1
October, 1876	Consumption	Germany	40	1	
October, 1876	Congestive fever	England	48		1
October, 1876	Organic disease of brain	Germany	28		1
October, 1876	Organic disease of brain	Arkansas	42	1	
October, 1876	Epilepsy	Tennessee	18	1	
October, 1875	Tabes mesenterica	China	45	1	
November, 1876	Consumption	China	35	1	
November, 1876	Organic disease of brain	New York	28	1	
November, 1876	Paralysis	Denmark	52	1	
November, 1876	General paralysis	England	52		1
December, 1876	Injury of spine	Maine	45	1	
December, 1876	Paralysis	Germany	50	1	
December, 1876	Epilepsy	France	64	1	
December, 1876	Maniacal exhaustion	Nova Scotia	34	1	
December, 1876	Consumption	United States	30	1	
December, 1876	Paralysis	Pennsylvania	50	1	
January, 1877	Paralysis	Hamburg	47	1	

TABLE I—Continued.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males.	Females.
January, 1877	Organic disease of liver	Massachusetts	30		1
January, 1877	Marasmus	Prussia	46	1	
January, 1877	Organic disease of brain	Connecticut	60	1	
January, 1877	Apoplexy	Ohio	37		1
February, 1877	Pneumonia	Prussia	37	1	
February, 1877	Consumption	Illinois	33		1
February, 1877	Consumption	Unknown	35	1	
February, 1877	Consumption	Ireland	26		1
February, 1877	Tuberculosis	New York	31	1	
February, 1877	Consumption	Canada	49	1	
March, 1877	Paralysis	England	39	1	
March, 1877	General paralysis	Germany	33	1	
March, 1877	Senile decay	New York	78	1	
March, 1877	General paralysis	England	63	1	
March, 1877	Organic disease of brain	Germany	58	1	
March, 1877	Consumption	China	32	1	
March, 1877	Consumption	Ireland	45	1	
March, 1877	Epilepsy	America	32	1	
March, 1877	Heart disease	Pennsylvania	49	1	
March, 1877	Marasmus	Ireland	38	1	
March, 1877	Consumption	Unknown	Unknown	1	
April, 1877	Congestion of brain	Unknown	Unknown	1	
April, 1877	Heart disease	Massachusetts	46	1	
April, 1877	Consumption	Unknown	Unknown	1	
April, 1877	Paralysis	England	42	1	
April, 1877	Consumption	Mexico	23	1	
April, 1877	Suicide	Massachusetts	66	1	
April, 1877	Organic disease of brain	Virginia	50	1	
April, 1877	Paralysis	Germany	Unknown	1	
April, 1877	Organic disease of brain	Unknown	Unknown	1	
April, 1877	Disease of liver	China	37		1
May, 1877	Organic disease of brain	China	42	1	
May, 1877	Tabes mesenterica	Hanover	34	1	
May, 1877	Consumption	Ireland	28		1
May, 1877	Consumption	California	24	1	
May, 1877	Paralysis	Ohio	46	1	
May, 1877	Epilepsy	United States	50		1
May, 1877	Apoplexy	France	48	1	
May, 1877	Consumption	China	Unknown	1	
May, 1877	Tabes mesenterica	Ireland	46	1	
May, 1877	Organic disease of brain	Germany	46	1	
May, 1877	Paralysis	Ireland	30	1	
May, 1877	Organic disease of brain	Germany	38	1	
May, 1877	Epilepsy	America	28		1
May, 1877	Diarrhoea	Maine	52	1	
June, 1877	Consumption	Ireland	37	1	
June, 1877	Organic disease of brain	Ireland	46		1
June, 1877	Consumption	France	46	1	
June, 1877	Consumption	Ireland	32		1
June, 1877	Paralysis	Ireland	34	1	
June, 1877	Dysentery	Ireland	45	1	
June, 1877	Maniacal exhaustion	Germany	37	1	
June, 1877	Nervous exhaustion	Germany	61	1	
June, 1877	Paralysis	China	Unknown	1	
June, 1877	Marasmus	Prussia	54	1	
June, 1877	Pulmonary abscess	South Carolina	45		1
June, 1877	Paralysis	Ireland	47	1	
June, 1877	Maniacal exhaustion	California	Unknown	1	
June, 1877	Consumption	Unknown	44	1	

TABLE J.

Recapitulation of the cause of death of one hundred patients during the year, from July 1st, 1876, to July 1st, 1877.

CAUSE OF DEATH.	Males	Females	Totals
Consumption	19	5	24
Organic disease of brain	11	2	13
Paralysis	12	—	12
Epilepsy	7	2	9
Decay of old age	2	2	4
General paralysis	3	1	4
Tabes mesenterica	3	1	4
Maniacal exhaustion	3	—	3
Disease of heart	3	—	3
Marasmus	3	—	3
Apoplexy	2	1	3
Tuberculosis	2	—	2
Pneumonia	2	—	2
Disease of liver	—	2	2
All other causes	9	3	12
Totals	81	19	100

TABLE FIRST.

Account of articles consumed and current expenditures in the Asylum for the year ending June 30th, 1877.

ARTICLES.	Value.
Flour	\$12,492 52
Meat	14,060 64
Sugar	5,925 39
Tea	1,727 47
Syrup	1,262 33
Potatoes	3,774 35
Butter	5,859 90
Coffee	2,277 26
Lard	643 00
Fish	1,174 03
Poultry and eggs	468 29
Beans and peas	462 10
Rice and cracked wheat	794 02
Cornmeal and middlings	547 37
Fruit	863 17
Vegetables	172 99
Salt	142 27
Vinegar	179 80
Small groceries	1,883 99
Soap and potash	1,167 88
Drugs	2,082 57
Liquor	854 37
Tobacco	1,977 13
Dry goods	2,109 90
Clothing and hats	7,127 47
Shoes and leather	2,374 28
Blankets	1,682 50
Furniture and crockery	1,735 34
Hardware and tinware	1,198 37
Hay, grain, and feed	1,488 39
Garden tools and seed	186 87
Lumber	1,377 62
Amount carried forward	

TABLE FIRST—Continued.

ARTICLES.	Value.
Amount brought forward	
Building materials and repairs	2,706 16
Brooms and brushes	495 44
Books and stationery	416 03
Oil and gas	2,150 50
Paints, oil, and glass	448 14
Fuel	16,899 47
Bedding	2,486 34
Castings, pipes, and iron	1,018 27
Discharged patients	268 50
Returned escapes	412 25
Pay-roll and wages	71,402 97
Miscellaneous	2,418 50
Total	\$181,196 15

TABLE SECOND.

Showing the cost of the different departments for the year ending June 30th, 1877.

DEPARTMENTS.	Cost.
Male kitchen and dining-room	\$28,997 02
Male department	52,688 71
Female kitchen and dining-room	18,735 47
Female department	31,152 69
Baking	12,937 87
Laundry and engine house	4,790 30
Farm, garden, and dairy	5,864 31
Repairs	4,531 92
Medical Superintendent	5,079 96
First Assistant Physician	4,300 00
Second Assistant Physician	4,300 00
Miscellaneous	7,817 90
Total	\$181,196 15

TABLE THIRD.

Showing the cost of improvements for the year ending June 30th, 1877.

IMPROVEMENTS.	Cost.
New floor, male department	\$1,583 71
New water works	3,452 80
Total	\$5,036 51

RECAPITULATION.

ITEMS.	Cost.
Current expenses for the year	\$181,196 15
Improvements for the year	5,036 51
Total	\$186,232 66

TABLE FOURTH.

Averages.

MONTHS.	Average number of patients on hand daily.	Average daily expenses.	Average cost per capita per day (cents)	Average cost per capita per month.
July, 1876.....	1,212	\$461 52	38	\$11 80
August, 1876.....	1,208	492 82	41	12 64
September, 1876.....	1,209	499 38	41	12 39
October, 1876.....	1,207	528 46	45	13 90
November, 1876.....	1,202	605 49	50	15 11
December, 1876.....	1,201	504 04	42	13 01
January, 1877.....	1,204	487 48	40	12 55
February, 1877.....	1,204	478 10	40	11 12
March, 1877.....	1,205	478 37	40	12 30
April, 1877.....	1,202	476 07	39	11 88
May, 1877.....	1,194	473 93	40	12 31
June, 1877.....	1,192	471 82	39	11 88
Yearly average.....	1,203	\$495 75	41	\$12 55

TABLE FIFTH.

Products of the Farm, Garden, and Dairy for the year ending June 30th, 1877.

ARTICLES.	Amount.
Beets, pounds.....	27,045
Tomatoes, pounds.....	22,120
Turnips and carrots, pounds.....	36,594
Pumpkins and squashes, pounds.....	13,506
Beans and peas, pounds.....	5,376
Other vegetables, pounds.....	675
Other vegetables, bunches.....	779
Corn and cucumbers, dozens.....	1,991
Cabbage, pounds.....	31,228
Onions, pounds.....	18,736
Lettuce and cauliflower, dozens.....	612
Peppers and okra, pounds.....	3,085
Apples, pears, and apricots, pounds.....	18,359
Grapes, pounds.....	26,813
Melons, dozens.....	20
Hay, tons.....	40
Fodder, tons.....	20
Pork, pounds.....	14,588
Milk, gallons.....	10,766
Eggs, dozens.....	481
Chickens, number.....	84
Swine, number (sold).....	49
Calves, number (sold).....	9
Yearlings, number (sold).....	13
Two-year olds, number (sold).....	2
Cows, number (sold).....	5
Bull, number (sold).....	1

IMPROVEMENTS.

During the past year some unavoidable improvement of the most valuable and permanent kind have been made. The ground floors of the centre building (male department) which had long been settling from the decay of the supporting timbers, have been repaired in a manner so radical and thorough, as to partake of the character of new work. The rooms also have been whitened, painted, and some of them replastered; and altogether this part of the Asylum has been so completely and carefully renovated as to put it in a better and more durable condition than when new.

But the most important, as well as the most costly, improvement has been made in the erection of the new water works. The old water works, as you are aware, were constructed of wood. A heavy trestle work about fifty feet high, with a large wooden tank thereon, comprised them, as far as any description for the present purpose is necessary. They were situated in the airing court where there are at times some three hundred patients. They were erected in eighteen hundred and fifty-eight, and hence had been standing nineteen years. The wooden trestle work had become so rotten and weak that there was danger of its falling, to the peril of the lives of the patients, and injury of the buildings within its reach. Early in the spring it was determined to build new water works of brick and iron. Satisfactory plans and specifications were made by Mr. Charles Beasley, architect, and in March (eighteen hundred and seventy-seven) the contract for their construction was awarded to S. L. Confer and H. E. Robbins, of Stockton, for the sum of three thousand three hundred and twenty dollars. The work was superintended by the architect, Mr. Beasley. It gives me pleasure to testify to the fidelity with which this contract was fulfilled—the greater pleasure because it was done willingly and with manifest intention of faithful performance.

These works consist of a brick tower fifty-one feet high from the ground line, sixteen feet square at the base, and fourteen feet square at the top. The tower rests on a firm, smooth hard-pan covered with cement mortar. The walls at the base are three and a half feet thick, at the ground-line two and a third feet thick, and at the top one foot and eight inches. The brick are hard-burned and laid in lime and cement mortar. At an elevation of thirty-five feet it contains an iron water tank eight feet in diameter, and twelve feet deep; and at the top of the roof of the tower, at an elevation of fifty-one feet, there is another iron tank of eleven feet diameter, and nine feet deep. These are made of three-sixteenths C. No. 1 iron, and riveted with one-half inch rivets at a red heat.

The new water works were completed in May, the water being put in the tanks May nineteenth, eighteen hundred and seventy-seven. They are situated in the rear of the buildings, and outside the inclosures occupied by patients. They cost three thousand three hundred and twenty dollars, as per contract with Confer and Robbins, and in addition one hundred and thirty-two dollars and eighty cents, the sum paid the architect and superintendent of construction, making the total cost three thousand four hundred and fifty-two dollars and eighty cents.

It is worthy of note and congratulation that the old structure was removed by Mr. Miller, the Asylum carpenter, without accident.

IMPROVEMENTS NEEDED AND RECOMMENDED.

The last year's experience has demonstrated that this institution will not be much further reduced in its numerical size by the operations of the Napa Asylum. The only future relief we can rely on from that institution is that it may prevent the rapid increase of patients in this, such as must have continued but for the opening of the other. It was our hope that the numbers here would be reduced, so we might discontinue the use of our wooden buildings, and also the one-story brick structures in the rear of the principal Asylum building. But there is now no reasonable prospect of realizing this desiderated amelioration of the condition of our inmates. We have now about one thousand two hundred patients. This number may possibly be diminished slightly, but it is more likely to be increased, as it certainly would be, as the result of a few prosperous seasons which would lead to an increase of population in the Sacramento and San Joaquin valleys. It is manifest then that this Asylum should be placed and kept in the best possible condition to perform its double duties.

For greater security against fire, brick structures, in more immediate connection with the main Asylum buildings, should be substituted for the wooden ones.

The one-story brick buildings above mentioned should be improved and enlarged.

The sewerage should be extended in vitrified clay pipes to the water, or tule border, west of the Asylum.

The street or carriage-way between the buildings of the male and female departments should be graveled.

The wooden buildings spoken of above are cheap structures, erected as temporary expedients at a time when there was no room, not even surface room on the floors, for the increasing patients, and no appropriation or law for the erection of proper buildings. They have more than paid for themselves every year since, in the saving of interest on what first-class accommodations in other places have been made to cost per patient. They were put up in eighteen hundred and sixty-nine, at an expense of about fifteen thousand dollars. They have accommodated ever since, an average of one hundred and sixty patients.

By the extension of the sewer, as recommended, the farm engine would be dispensed with and a saving made. There would be no use for it at all for about six months in the year, and some simpler and more economical mode of irrigation could be adopted during the dry season.

The graveeling recommended is of manifest necessity, as the adobe soil in the wet season becomes so soft that it is impassable for either drays or light carriages. This improvement has been approved and recommended by legislative committees.

I submit the above recommendations for examination and mature consideration, and trust that with your indorsement they will be authorized and provided for by the next Legislature.

You will observe, by the Treasurer's account and the accompanying tables, that the past year has been one of gratifying financial success. The quarterly estimates and the requisitions on the State Controller have been less than the appropriations for the same

periods. Of the money drawn there has been an increasing surplus. The cost of maintenance during the year has been only forty-one cents per day for each patient. This cost of forty-one cents per patient, it must be observed, is not merely the personal expense of each individual patient, independently of the general expenses of the establishment. It is computed on the entire current expenditures of carrying on the institution, embracing salaries and maintenance of physicians, wages and board of employés, ordinary repairs, and so forth, as well as all that the patients themselves consume or have provided for them by the State. This is the lowest average annual per capita cost ever reached in this Asylum. We may attribute it, in part, to a policy long pursued of refraining from all avoidable improvements and undertakings of an expensive character, not authorized and specially provided for by the Legislature.

In conclusion, grateful for your uniform courtesy and kindness, and encouraged by the interest you manifest in the welfare of the institution, and by your faithful attention to its affairs, I respectfully submit this report of its operations for the past year.

G. A. SHURTLEFF,
Medical Superintendent.

State Asylum for the Insane, Stockton, Cal., July 1st, 1877.

BIENNIAL REPORT
OF
THE BOARD OF DIRECTORS
OF THE
CALIFORNIA STATE PRISON,
COMMENCING
JULY 1st, 1875, AND ENDING JUNE 30th, 1877.



BOARD OF DIRECTORS
OF THE
CALIFORNIA STATE PRISON.

HIS EXCELLENCY, WM. IRWIN,
Governor.

HONORABLE JAMES A. JOHNSON,
Lieutenant-Governor.

HONORABLE THOMAS BECK,
Secretary of State.

HONORABLE JAMES A. JOHNSON, RESIDENT DIRECTOR,
Lieutenant-Governor.

OFFICE OF THE BOARD OF STATE PRISON DIRECTORS, }
SAN QUENTIN, CAL., July 1st, 1877. }

To His Excellency,
WM. IRWIN,
Governor of California:

In compliance with law, we respectfully submit the following Bien-
nial Report of the Resident Director, embracing reports of the Clerk
of the Prison, the Turnkey, and the Physician. These reports show
the entire working of the Prison from July first, eighteen hundred
and seventy-five, to June thirtieth, eighteen hundred and seventy-
seven, except as mentioned by the Physician in his report, although
it will be understood this administration did not assume control of
the institution until December, eighteen hundred and seventy-five.

Very respectfully,

JAMES A. JOHNSON,
THOMAS BECK,
State Prison Directors.

REPORT OF THE RESIDENT DIRECTOR.

To the Honorable Board of Directors of the California State Prison :

GENTLEMEN: I have the honor to present the Biennial Report of the Resident Director of the California State Prison, covering the time between the first of July, eighteen hundred and seventy-five, and the thirtieth of June, eighteen hundred and seventy-seven, inclusive.

You are respectfully referred to the reports of officers for full details of the nature required by law.

Upon the whole, considering all the circumstances, we may justly feel satisfied with the management of the Prison for the time embraced in this Report. On the twenty-eighth of February, eighteen hundred and seventy-six, the main work-shops and machinery were destroyed by fire. Besides the great loss to the State by the destruction of the buildings and other property, other great losses accrued. The breaking up of the contractors' shops, and consequent loss of the wages of the men; the extraordinary expenses for all necessary things to feed and cook for the men; and the utter demoralization that naturally resulted from the throwing of the whole number of convicts together in an open pen, cooking, eating, jesting, and frolicking amid the ruins of the old buildings. We were compelled to make the best arrangements possible for cooking and mess-room. At first we obtained a number of large iron kettles, and with these, set on rocks and bricks, the cooking was done. For mess-room the open air was used, the men receiving their food as best they could.

We soon, however, dispensed with these temporary make-shifts, building wooden vats heated by steam, instead of using the iron kettles. These were put up in the wash-house where others were already in use for washing, which were also used for cooking. For mess-rooms, two wooden buildings, each one hundred by thirty feet, were hurriedly thrown up. In the same hurried manner, to prevent further demoralization, and to secure the letting of a part of our idle force, we put up a two-story frame building for the California Furniture Manufacturing Company's use. These temporary improvements cost heavily, although the waste lumber obtained when they were demolished has all been used for fencing or outbuildings of some kind.

FORCE.

About the middle of May, eighteen hundred and seventy-six, affairs became settled, since which time no similar institution was

ever managed with more apparent satisfaction to all concerned—officers, guards, and convicts. Where all have behaved so well, I cannot distinguish among officers to bestow praise. They have, one and all, done their whole duty; and even to the stewards, hostler, and guards I extend praise for most efficient service. On account of the confusion caused by the burning of the shop buildings and the great number of men employed in rebuilding, handling, and hauling material therefor, and in making brick (there being constantly outside the walls, in daytime, nearly or quite two hundred and twenty-five men), we have been compelled to increase the guard force, so that at the present time the whole force and compensation is as follows:

RANK.	Salary per Month.
The Warden receives per day \$10 00	
Captain of the Guard	\$150 00
Captain of the Yard	150 00
Commissary	150 00
Physician	150 00
Clerk	125 00
Turnkey	125 00
Upper Gate-keeper	125 00
Lower Gate-keeper	100 00
Engineer	100 00
Captain of the first night-watch	80 00
Captain of the second night-watch	80 00
First Steward	75 00
Second Steward	60 00
Hostler	60 00
One guard, acting as flogger	75 00
One guard, acting as receiver of freights	65 00
Fifty-five guards, each	50 00

The cruel and inhuman iron-will rule usual at prisons is not in vogue here. Instead, we treat all who will bear it—and most prisoners do—with kindness, and even courtesy. The plan of individualizing each one, and recognizing each from all others, and requiring something of each as an individual, is the surest method of obtaining good government at an institution like this. I might with propriety say something, here, on the questions of prison discipline and management. I will not, however, lengthen this Report, which must necessarily be long, by entering upon a useless discussion: useless, because the system can never be changed at this Prison, for the reason that the system adopted at any such institution must depend entirely upon the architectural construction of the buildings. The buildings here can never be changed. I will, however, put myself on record as saying: The solitary system—impossible here—never reclaimed any man, and never will; it is cruel, and more barbarous than capital punishment. The silent system is worse and more cruel. The system which corresponds to the enlightenment of the age is that known as the congregate system, where men work together and when not at work talk freely together. The reasons usually assigned by the advocates of the solitary and silent systems are strong reasons, though not the strongest, for the universal adoption of the congregate system.

IMPROVEMENTS

As follows have been made, all of which are permanent except those before mentioned: Brick drying-house, thirty-three by fifteen feet; brick addition to wash-house, thirty-five by twenty feet; brick boiler-house, for cooking, twenty-six by twelve feet; two stairways, each thirty-six by sixteen feet; new brick addition to female prison, forty-four feet long, sixteen feet wide, two stories high, and divided into convenient rooms. The two old south cell buildings had each one hundred feet of new roofing, and the balconies were replanked. A new belfry has been placed over the front gate. After the fire, a large temporary bake-oven was erected, which had to be taken down after the erection of the new building. Seven large wooden vats, for cooking by steam; seats, desks, etc., in Library and Chapel; two dining-rooms, one hundred by thirty feet each; frame house for furniture shop, one hundred and thirty by thirty-six feet, two stories high.

Outside the walls: About eleven hundred feet of post and plank fencing, built of old lumber, obtained from the foregoing mentioned buildings when removed; hog house, fifty by thirty feet, with stalls; blacksmith shop, straw house, and wagon house.

FINANCIAL STATEMENT.

For a complete financial statement, I refer to the report of the Clerk:

Table One—Monthly cash receipts, total, four hundred and twenty-three thousand three hundred and twenty-seven dollars and eighty-one cents (\$423,327 81).

Table Two—Total disbursements, four hundred and twenty-seven thousand and two dollars and twenty-four cents (\$427,002 24).

Table Three—Gives amount on hand July first, eighteen hundred and seventy-five, four thousand seven hundred and forty-two dollars and eighty cents (\$4,742 80), and considered with Tables One and Two, leaves a balance on hand July first, eighteen hundred and seventy-seven, of one thousand and sixty-eight dollars and thirty-seven cents (\$1,068 37).

Table Four—Gives sources of all receipts, four hundred and twenty-three thousand three hundred and twenty-seven dollars and eighty-one cents (\$423,327 81).

Table Five—Shows to whom, and for what paid, four hundred and twenty-seven thousand and two dollars and twenty-four cents (\$427,002 24).

In explanation of Tables One, Two, Three, Four, and Five, it is proper to say: The apparent difference between these Tables and Tables Six and Seven, giving actual maintaining cost, occurs through the receipt of large sums for merchandise bought and resold, money received from prisoners on deposit and repaid. Twelve thousand and twenty-nine dollars and three cents (\$12,029 03), received from Nevada Bank, and deposited in First National Gold Bank, to keep the gold and silver accounts separate, and then received again from that bank; live stock—hogs—bought and sold. Thus it will be seen the accounts are swelled both ways, when in reality the cost has been but three hundred and eighty-five thousand two hundred and ninety-eight dollars and ten cents (\$385,298 10).

Table Six—Gives the maintaining cost of the Prison per month, including improvements, interest and discount, the total being for the two years three hundred and eighty-five thousand two hundred and ninety-eight dollars and ten cents (\$385,298 10).

Table Seven—Gives the maintaining cost of specified accounts.

Following the course of my predecessors, and also all similar reports, in arriving at a correct estimate of the cost of running the Prison, I deduct the sums paid for Prison improvements, interest and discount on Controller's warrants.

Total cost		\$385,298 10
Less improvements	\$15,602 30	
Less interest	6,946 39	
Less discount	1,131 67	
	<hr/>	23,680 36
Actual cost of supporting Prison		<hr/> \$361,617 74

The average number of prisoners being one thousand one hundred and sixty-one at the end of each month, gives the cost of each prisoner as follows:

Yearly	\$155 73.5
Monthly	12 97.8
Weekly	2 99.5
Daily	42.7

This is a saving upon the last administration. The cost for each prisoner for the two years ending June thirtieth, eighteen hundred and seventy-five, was as follows:

Yearly	\$160 50.
Monthly	13 37.5
Weekly	3 08.6
Daily	44.

For the two years ending June thirtieth, eighteen hundred and seventy-three, the cost per annum for each prisoner was one hundred and ninety-four dollars and thirty-six and one-half cents (\$194 36½); per day, fifty-three and one-sixth cents (53⅓).

The cost of the State of Maine State Prison for the year ending November thirtieth, eighteen hundred and seventy-six, was twenty-nine thousand seven hundred and seventy-three dollars and forty-nine cents (\$29,773 49) for one hundred and seventy-one prisoners, or one hundred and seventy-four dollars and eleven cents (\$174 11) per prisoner.

For the year ending December thirty-first, eighteen hundred and seventy-six, the Work-house and House of Correction, Asylum for the Insane, and the Almshouse for Rhode Island, averaged one hundred and twenty-three dollars and seventy-two cents (\$123 72) for each inmate, or two dollars and thirty-eight cents (\$2 38) per week. The same institutions for eighteen hundred and seventy-five, one hundred and thirty-six dollars and fifty-five cents (\$136 55) for each inmate, or two dollars and sixty-two cents (\$2 62) per week.

From the very able report of the Hon. J. Z. Moylan, Inspector of Penitentiaries for the Dominion of Canada, made to Hon. Edward Blake, Q. C., Minister of Justice, I learn that at the Kingston Penitentiary the cost per convict for the year eighteen hundred and seventy-six was one hundred and twenty dollars (\$120 00).

At the St. Vincent De Paul Penitentiary the cost per annum for eighteen hundred and seventy-five for each convict was three hundred and eighty-three dollars and fifty-five cents (\$383 55), and at the same institution for eighteen hundred and seventy-six it was two hundred and ninety dollars and ninety-three cents (\$290 93) for each convict.

At the St. John's Penitentiary the cost for each convict for the year eighteen hundred and seventy-six was one hundred and seventy-seven dollars and eighty-three cents (\$177 83).

At the Halifax Penitentiary, the cost per prisoner for the year eighteen hundred and seventy-five was two hundred and seventy-five dollars (\$275 00), and for eighteen hundred and seventy-six, two hundred and twenty-nine dollars and ninety-five cents (\$229 95).

At the Illinois Penitentiary the cost per man per day in eighteen hundred and seventy-five was forty-five and three-fifths cents ($45\frac{3}{5}$); in eighteen hundred and seventy-six, forty and seven-eighths cents ($40\frac{7}{8}$).

In the Kansas Penitentiary the daily cost per convict for eighteen hundred and seventy-six was fifty-one and one-half cents ($51\frac{1}{2}$), or one hundred and eighty-six dollars and eighty-eight cents (\$186 88) per annum.

In the New Jersey State Prison for eighteen hundred and seventy-six the cost per prisoner, less improvements and repairs, was one hundred and thirty-eight dollars and forty-eight cents (\$138 48).

At the North Carolina Penitentiary, the cost per prisoner, for eighteen hundred and seventy-six, was forty and one-half cents ($40\frac{1}{2}$).

It will seen that I have given twelve citations of maintaining cost, outside of California, which, being averaged, make the cost per prisoner for all the institutions aggregated, fifty-eight and four-tenths cents (58.4) per day, which is fifteen and seven-tenths cents (15.7) more per day per prisoner than the cost at our Penitentiary.

The cost of the Ohio Penitentiary, for eighteen hundred and seventy-three, was, per prisoner, per annum, one hundred and sixty-seven dollars and eight cents (\$167 08); for eighteen hundred and seventy-four, one hundred and sixty dollars and four cents (\$160 04) per convict; and for eighteen hundred and seventy-five, one hundred and fifty-three dollars and eighty-two cents (\$153 82) per prisoner. These average forty-three and one-half cents ($43\frac{1}{2}$) per day for each convict.

I have not selected the foregoing, but have included in the comparison every Prison of which I have a late report. By practicing a fair system of economy, with the advantages we now have, I think it possible for us to reduce the expenses below forty (40) cents per day for each prisoner. The cost per prisoner, per day, I have attempted to divide, but can only say I am approximately correct, from the fact that it is impossible to make the exact allowances to each item. The division of cost is as follows:

ITEMS.	Cost in Cents.
Food	10.4
Clothing and shoes	3.2
Water	2.9
Fuel	2.4
Bedding	1.2
Medicines .....	.6
Washing, stationery, and sundries	1.6
Hay and feed	1.1
Cash to prisoners when discharged .....	.3
Salaries and board of officers, guards, and employes	19.0
Total	42.7

Tables Eight and Nine contain items of expenditure—other than maintaining cost, improvements, interest, and discount—showing the same to be twelve thousand two hundred and sixty-six dollars and fifty-seven cents (\$12,266 57).

EARNINGS.

Table Ten gives the earnings per month, and Table Eleven gives the specified earnings, the total being eighty-five thousand eight hundred and eighty-three dollars and ten cents (\$85,883 10), divided as follows:

Labor	\$76,765 88
Wash-house	1,015 52
Drayage	745 00
Support of United States prisoners	7,356 70
Total	\$85,883 10

INCOME.

Table Twelve shows the income, other than earnings, to be three hundred and twelve thousand seven hundred and seven dollars and eighty-seven cents (\$12,707 87) aggregated.

Table Thirteen specifies the income, other than earnings. In this table it will be noticed that the income from the State treasury is three hundred and one thousand and seventy-one dollars (\$301,071 00). The actual cash received, however, direct from the treasury, has only been one hundred and thirty-one thousand three hundred and twenty-one dollars (\$131,321 00). The balance to make up the full sum was paid by the State Treasurer to the Nevada Bank of San Francisco, from which bank the Directors drew the money, commencing June, eighteen hundred and seventy-six, depositing Controller's warrants, as drawn, Nos. 6,603, 6,880, 680, 1,273, and 1,442, for redemption. The redemption of these warrants was, of course, an expense to the Directors, which amounted, altogether, to the sum of one thousand one hundred and thirty-one dollars and sixty-seven cents (\$1,131 67), for expressage from Sacramento to San Francisco, and for discount on silver converted to gold.

Table Fourteen contains the financial statement of the Prison on the thirtieth of June, eighteen hundred and seventy-seven.

The cash charges to profit and loss the books show to be as follows: Exchange on remittance, July, eighteen hundred and seventy-five,

sixteen dollars and eighty cents (\$16 80); exchange on treasury draft, September, eighteen hundred and seventy-five, one thousand two hundred and sixty-nine dollars (\$1,269 00); January, eighteen hundred and seventy-six, five hundred dollars and seventy cents (\$500 70), for same purpose; February, eighteen hundred and seventy-six, twenty-one dollars and sixty-two cents (\$21 62), for discount on currency sold; April, eighteen hundred and seventy six, for currency sold, and expressage on money, one hundred and seventy dollars and eighty-five cents (\$170 85); and fifty-two dollars (\$52 00) paid to several convicts for saving old iron, etc., sold for three hundred and seventy-eight dollars and fifty cents (\$378 50), and credited to profit and loss; the balance was for small discounts on change.

In the per diem cost per man, the specified items show but little variation, except the general reduction; and except the items of hay and feed, and water. The increase in the former is attributable to the great increase in live stock, made necessary by the increased amount of hauling in putting up new buildings, brick-making, etc. The increase being from seven mills per prisoner to one cent and one mill per prisoner per day.

WATER.

The decrease in the cost of water is attributable to the increased number of prisoners. The last biennial report gave the cost of water per prisoner per day at three cents and three mills; the average number of prisoners for the two years ending with that report being one thousand and thirty-nine. The cost of water then and now being one thousand dollars per month, and the average number of prisoners being, for the last two years, one thousand one hundred and sixty-one; the reduction is in proportion to the increase of prisoners, to two cents and nine mills. The contract made by our predecessors with the Marin County Water Company, for a supply of water, long since expired, but that Company has continued to furnish us at the same rates; at least no new contract has been entered into. We are most completely at the mercy of this company, for we must have water. There is no danger that the present managers of the company will ever take advantage of our situation to extort from the State more than a fair rate for water, but the property may fall into other hands. At any rate this Penitentiary will exist long after the present managers of the water company shall cease to be. In view of the danger impending, I venture the suggestion that some permanent arrangement be made. The Legislature can pass an act authorizing a contract which will be permanent. Such contract should be made, and a fixed sum should be paid for each convict.

LABOR BY CONTRACTORS.

At the present time, and for some time past, labor has been let as follows: California Furniture Manufacturing Company, one hundred and twenty-five men; J. C. Johnson & Co., saddlery and harness, fifty men; Stone & Hayden, saddlery and harness, sixty men; making a total of two hundred and thirty-five men employed by contractors, at fifty cents per day, and averaging an income to the State of three thousand and fifty-five dollars (\$3,055 00) per month. Arrangements have been made with two other parties,

each of whom will employ, within a few weeks, from twenty-five to fifty men—one party in the manufacture of boxes, and the other in coopering. Every reasonable effort has been made to induce parties to set up the boot and shoe business at the Prison, a kind of labor that ought to be more profitable here than any other. It appears, however, that Chinese labor can even run the Penitentiary into idleness. But for the law requiring the Directors to hire the labor at not less than fifty cents per day, we might now have six or seven hundred men employed at twenty-five to fifty cents per day, and yielding to the State from six thousand (\$6,000) to seven thousand (\$7,000) dollars per month. We will not be able to accommodate any other contractors who work in wood after the above-mentioned parties shall begin work; and, having two saddle and harness shops already, we must look for some new industry. We must have something started that will require but little space outside the shops. Of shop room we have enough. Shoe-making and tailoring would be the choice avocation for the prisoners, but on account of the very cheap wages of Chinamen engaged in this sort of business, it is impossible to get contractors to ruin themselves by hiring convict labor at fifty cents per day. The only way to employ the convicts is for the Legislature to suffer them to be hired for the best obtainable price. It is idle to think, however, of this Penitentiary supporting itself while freemen on the outside are suffering for bread. This might be made to contribute largely to its own support, but never, under the present system, can it earn over from eight thousand (\$8,000) dollars to ten thousand (\$10,000) dollars per month. It proper legislation could be had, putting the institution under long or permanent control, subject to a board of citizens, also of long or permanent duration, possessing power to make contracts for a term of years, then our entire force might be hired to advantage, and almost or quite made self-supporting. Under the decisions of our Supreme Court the laws must be materially changed, if not the Constitution itself, before contracts of long duration can be made. No business man can afford to risk his fortune and credit upon the uncertainties of an election. This is nearly the case as the laws now stand. The cost of maintaining convicts is not so much a matter of serious consideration as how to lessen their number, and how to reform them and restore them to usefulness. It is in the decreased number of the convict class, and in their reformation, that the money must be saved to the taxpayer, and society benefited in a thousand ways. These benefits may be sent down through countless generations; while, without such reformation, streams of vice “never ceasing” may flow instead.

LABOR—OUTSIDE THE WALLS FOR STATE.

IN WHAT CAPACITY EMPLOYED.	Number of Men	IN WHAT CAPACITY EMPLOYED.	Number of Men
Brick yard	110	Kitchen help	6
Bakers	8	Stable	10
Blacksmiths	6	Sweepers	3
Butchers	2	Servants	14
Carpenters	4	Waiters, officers' and guards' dining-	
Cart drivers	18	rooms	4
Cooks, for officers' quarters	3	Wood yard	5
Commissary department	8	Wash-house	4
Clerk's office	3	Warden's residence, 5; Warden's office, 4	9
Excavating	35		
Gardeners	10	Total	262

LABOR—INSIDE THE WALLS FOR STATE.

IN WHAT CAPACITY EMPLOYED.	Number of Men	IN WHAT CAPACITY EMPLOYED.	Number of Men
Brick layers	20	Lamp room	3
Bath tenders	2	Library	19
Barber shops	10	Mortar mixers and carriers	8
Boiler house	3	Mattress makers	3
Coopers	2	Painters	6
Cell tenders	20	Plumbers	4
Carpenters	10	Room tenders	10
Cooks	15	Shoe shop	18
Closet cleaners	10	Tailor shop	8
Captain-of-the-Yard's office	4	Tin shop	4
Dining-rooms	36	Turnkey's office	4
Door tenders	9	Wood yard	4
Donkey engine	3	Whitewashers	5
Engine room	4	Wash-house	41
Gate-keepers	8	Yard sweepers	12
Gate, upper	3		
Gate, lower	3	Total inside	339
Hospital cooks	5	Total outside	262
Hood's gang	7		
Hospital help	8	Total employed for State	601
Hod carriers	8		

In many cases less than half the force could do the work, but it is very desirable to employ as many of the convicts as possible, hence we divide the labor.

TURNKEY'S REPORT.

From the report of the Turnkey, it will appear that the increase of prisoners in two years has been two hundred and thirty, there being in the Prison, June thirtieth, eighteen hundred and seventy-five, one thousand and eighty-eight, and afterward received up to July first, eighteen hundred and seventy-seven, one thousand one hundred and thirty-eight, giving total inmates two thousand two hundred and twenty-six for the two years. Of this number, nine hundred and

eight have been discharged under the Act, restored, pardoned, died, escaped, etc., leaving on hand one thousand three hundred and eighty-seven. These numbers make the monthly average one thousand one hundred and sixty-one inmates. Of the number of escapes, mentioned in the Turnkey's report, it will be seen only three were returned as such; three were returned for other offenses, one killed in an attempt to recapture, and three are yet at large.

NATIVITY.

The Turnkey's report of nativity (Table III) will be examined with interest. It will be seen that California sends one hundred and fifty-seven convicts to the institution; New York, one hundred and fifty-four; Pennsylvania, forty-five, and that all the American States together send six hundred and ninety-one. From the largest contributors abroad, China sends us one hundred and ninety-seven; England, sixty-five; Ireland, one hundred and seventeen; Mexico, forty-three; Canada, twenty-four; Germany, fifty-three; and France, twenty-one. All foreign countries together, six hundred and twenty-seven.

CLASS OF CRIMES.

The Turnkey's Table Number IV classifies the crimes. I will only call attention to the most important, as to number and class: assault to murder, forty-eight; assault to rob, thirty-five; burglary and robbery, one; felony and robbery, two; grand larceny and robbery, one; house-breaking and robbery, one; robbery, one hundred and forty-five, making a total of one hundred and eighty-four robbers. Of those who have slain their fellow-man, by murder in first degree, second degree, or manslaughter, there are one hundred and ninety-nine. Of those who have committed grand larceny, there are two hundred and eighty-one. Of those who have committed burglary in some degree, or in connection with other crimes, or attempted to commit burglary, or have been guilty of house breaking, there are the astonishing large number of four hundred and eleven.

TERM OF SENTENCE.

Turnkey's Table Number V shows the terms of imprisonment. From a careful examination of this table, if the admissions continue in the same ratio as for the last two years, we may expect, in less than six years, to have more than two thousand prisoners.

AGE OF PRISONERS.

By the Turnkey's Table Number VI we learn that we have eight hundred and thirty-one prisoners under thirty years of age, five hundred and six under twenty-five, fifty-nine are twenty, fifty are nineteen, forty-nine are eighteen, twenty-four are seventeen, eleven are sixteen, two are fifteen, and one is fourteen. An earnest contemplation of this table ought to excite some action for the protection of boys against temptations to commit crime, which are so common in our cities. Perhaps the most direct road to the rescue of this class is to afford them and their parents labor when they are in need, and see that they perform it. Had this State, for the last fifteen years, been

free from the curse of that idleness, resulting doubtless in some measure from Chinese labor, but in a greater degree from the habit of visiting the gin-mill den, it is not unreasonable to suppose the miserable parents of these miserable boys would to-day be industrious, thrifty, and honest people, performing happily their proper functions in society, and this young army of criminals, miseries chosen, instead of being lost to themselves and society, would now be the inmates of happy homes, the pride and hope of approving mothers and fathers. One hundred and ninety-six children in the Penitentiary, and this out of a population of less than eight hundred thousand. Every man, good man, intuitively knows the remedy—it should be administered.

EDUCATIONAL.

Turnkey's Table Number VII, showing the educational abilities of the inmates of the Prison, gives the number who can read and write at nine hundred and eighty-five; read, but not write, at twenty-four; neither read nor write at three hundred and nine. If we consider the number of Chinese and Indians in our Prison who can neither read nor write, and deduct them from the whole number, so as to match our whites and negroes against the same in other States, it will be found that ours possess the advantage in a large degree. In fact among the younger convicts they can all read and write.

WHERE FROM.

Turnkey's Table Number VIII is chiefly interesting as proof of the fact that the large counties which pay most of the taxes also furnish most of the convicts:

Alameda.....	46
Los Angeles.....	55
Sacramento.....	97
San Francisco.....	455
San Joaquin.....	48
Santa Clara.....	43
Total.....	744

The over-population charged to San Francisco and other large cities may properly be attributed to the causes mentioned under Table Number VI.

OCCUPATIONS.

Turnkey's Table Number IX, showing the occupation of prisoners when sentenced, is perhaps the most unreliable of anything to be found on our books in regard to the prisoner before his admission here, except as to nativity. The professional criminal always lies about his nativity; always being a stranger, he can well do so. He almost invariably lies about his occupation. We find five hundred and forty-five set down as laborers, not that they ever were laborers, but because they never learned to work.

TERMS.

Turnkey's Table Number X, giving the number of terms, shows that nine hundred and fifty are serving out their first term, two hun-

dred and fifty-six the second, sixty-seven the third, twenty-seven the fourth, fifteen the fifth, and three the sixth. It is safe to class nearly all, except the nine hundred and fifty, as professional criminals. But they can be reclaimed.

ISSUED.

Turnkey's Table Number XI contains a statement of articles issued from this office for the two years ending June thirtieth, eighteen hundred and seventy-seven :

Woolen pants	5,102
Citizen pants	262
Woolen shirts	4,892
Citizen shirts	896
Shoes (pairs)	4,738
Hats	2,175
Blankets	919
Repaired	802

There are six females in the Prison, a fact I do not see stated in any of the officers' tables or reports, so I state it here.

CAPACITY OF PRISON.

It is absolutely certain that a new home must soon be found for California convicts, or else the San Quentin Prison must be enlarged. With the number of bricks we shall have on hand at the end of this burning season, the Prison walls could be enlarged, by the addition of about three and a half acres, at a small cost to the State for lime, cement, sand, iron, etc.

Either this must be done, the Folsom Prison put in operation, or a new one built some place else. Of course it would be inexpedient and unwise to hunt out and purchase a new location, because of the necessarily very great expense such purchase and location would entail. As to the Folsom Prison, I am certain, from an examination of the plans, grounds, and work done, that it would cost millions to construct it according to original designs, with an enclosure of say twenty acres. The unfinished pen, and buildings for officers, could be made habitable for two hundred convicts, and the proper number of officers, for less than one hundred thousand dollars. But from the lay of the ground, I am of the impression that no outer wall could be built at that prison, which would at all be safe, under ten or fifteen years, with any such force. And in the meantime, the cost for officers and guards would necessarily be great in proportion to the prisoners. If sale could be found for the stone, of which there is the greatest abundance, it might, and in my judgment would be, good policy to work say two hundred men at that place as long as such sales could be continued, using the cheapest possible structures for officers and convicts in the meantime. This plan, however, I would adopt after contract made for the product of the labor. The personal property at that institution has all been stored, and remains as it was when the last Legislature adjourned. I have volunteered to say this much about the Folsom Prison, but should not have mentioned it at all, except in connection with remarks upon the necessity for increased prison accommodations.

NEW BUILDINGS.

The last Legislature appropriated two hundred thousand dollars (\$200,000 00) to be used in putting up shop buildings, with machinery, and for such other purposes as might seem advisable to the Directors, if any sum should remain over. Through the able assistance of Mr. A. A. Bennett, the architect whose plans were adopted, we have succeeded in putting up a substantial brick building, four hundred feet long by sixty feet wide, four stories high, with fire walls cutting it into sixteen rooms, one hundred by sixty feet; boiler house, forty-six by thirty feet; boilers, two; a fine Corliss engine of two hundred horse power, with proper shafting for machinery; water pipes, gates, and all proper appliances, at a cost to the State of one hundred and twenty-nine thousand nine hundred and ninety-five dollars (\$129,995 00), including nine thousand five hundred and ninety-eight dollars and ninety-eight cents (\$9,598 98) for wood, and one hundred and fifty-six dollars and twenty-nine cents (\$156 29) for coal and coke, used as fuel in burning brick, and three thousand three hundred and eighty-nine dollars and ninety-one cents (\$3,389 91) paid for discount and interest. We also added to the stone cell building forty-eight iron cells, at a cost of twenty-three thousand nine hundred and sixty-eight dollars and sixty-six cents (\$23,968 66), making a sum total expended of the appropriation of one hundred and fifty-three thousand nine hundred and fifty-three dollars and sixty-six cents (\$153,953 66); and one brick supporting wall, one hundred feet long, ten feet high, and a bulkhead wall across the yard, three hundred and fifteen feet long and thirty-three feet high. The large sum paid for discount and interest is owing to the fact that all the contracts were made payable in gold, when the State treasury paid ten per cent. of the amount in silver.

Following will be found complete tabular statements showing disbursements for the new buildings:

BUILDING FUND EXPENDITURES

For the erection of workshop and double cell building in the California State Prison, commencing May, 1876, and ending May, 1877.

WORKSHOP—ARTICLES.	Amount.	WORKSHOP—ARTICLES.	Amount.
Lumber	\$18,790 43	Ropes and blocks	110 35
Iron	530 71	Derrick	45 00
Lime	5,455 10	Truck and barrow wheels	71 00
Cement	2,315 50	Elevators	2,747 00
Sand	1,885 78	Water closets	242 75
Water pipes and fittings	4,831 58	Smokepipe	95 00
Wood, "for burning brick"	9,598 98	Plumbing	1,450 00
Axle pulleys	63 80	Leather belting	694 00
Fire brick	31 50	Iron doors	2,750 00
Engine	19,225 00	Hire of donkey engine	240 50
Fixtures for engine and boiler	2,245 50	Wages to carpenters and masons	28,460 63
Steam boiler and heater	400 00	Salary to architect	4,000 00
Boilers	9,700 00	Sawing lumber, etc.	481 28
Tin roofing	2,352 40	Freight and drayage on merchandise	367 04
Asphaltum and tar	272 85	Interest	2,253 44
Granite blocks and sills	1,306 66	Discount on Controller's warrants	1,136 47
Nails	442 50	Advertising	39 00
Screws, bolts, nuts, and rivets	631 73	Postage, expressage, and telegrams	22 50
Tools	589 80	Total	\$130,508 06
Paints, oils, and lead	475 28	Less credit for empty barrels	\$489 41
Powder and fuse	32 45	Merchandise returned	28 65
Glass	647 35		513 06
Tobacco, "issued to prisoners"	847 33	Cost of workshop	\$129,995 00
Sashes	424 00		
Stair railings	239 12		
Coal and coke	156 29		
Iron castings	627 90		
Hose and couplings	965 81		
Water-gates	216 75		

EXPENDITURES

On double cell building, containing forty-eight cells.

ARTICLES.	Amount.	ARTICLES.	Amount.
Iron	\$10,250 00	Sill plates	180 00
Lumber	1,000 00	Iron railings	584 00
Building iron cells	4,547 00	Roofing cells	502 50
Wages to carpenters and masons	3,350 00	Interest	390 00
Lime	350 00	Arch plates	48 00
Cement	350 00	Grates	48 00
Sand	300 00	Cost of cell building	\$23,968 66
Iron beams	695 16	Cost of workshop	129,995 00
Tools	50 00	Total	\$153,963 66
Paints, oils and lead	400 00		
Coal and coke	80 00		
Locks for cell doors	844 00		

EXHIBIT.

Showing the number of days worked by prisoners during the erection of workshop and cell building.

Laborers	27,667 days.
Blacksmiths and carpenters	1,338 days.

BRICK YARD.

Laborers	11,687 days.
Horses	1,219 days.

BRICK ACCOUNT.

Bricks manufactured.....	2,683,000
Previously on hand.....	450,000
Total.....	3,133,000
Used in buildings.....	3,033,000
Balance on hand.....	100,000

The following recapitulation and addition of items will show all that is necessary:

Whole cost of shops, boiler house, boilers, engine, shafting, water pipes, water-gates, hose, nozzles, etc.....	\$129,995 00
Less interest and discount.....	3,389 91
Cash paid for material, labor, machinery, etc., for new shops.....	\$126,605 09
Labor of prisoners.....	13,050 00
Labor in brick-yard, prisoners, cost, etc.....	7,214 00
One million brick on hand.....	5,000 00
Hauling, trucks, carts, etc.....	2,000 00
	\$153,869 09
Deduct value of nine hundred and seventy-five thousand eight hundred and fifty-six bricks, at six dollars and eighty-four cents per thousand, used in cell building and bulkhead.....	6,776 48
	\$147,092 61
Engine.....	\$19,225 00
Boilers.....	9,700 00
Fixtures for engine and boilers.....	2,245 00
Water pipes, etc.....	4,831 58
Water-gates.....	216 00
Steam boiler for cooking.....	400 00
Leather belting.....	694 00
Smokestack.....	95 00
	37,406 58
Cost of building, including labor of convicts.....	\$109,686 03
Convict labor and brick on hand.....	27,264 00
Cash paid for building.....	\$82,422 03
Cell building, total cost.....	\$23,968 66
Deduct interest and discount.....	390 00
Paid for material, wages, etc.....	\$23,578 66
Value of labor of prisoners.....	1,450 00
Two hundred and seventy-five thousand eight hundred and fifty-six bricks, at six dollars and eighty-four cents per thousand.....	1,886 85
Total cost.....	\$26,915 51

COST OF BULKHEAD AND WALL.

Seven hundred thousand bricks at six dollars and eighty-four cents per thousand..	\$4,788 00
Labor of freemen, one hundred and twenty-five days, included in sum paid for cell building.....	625 00
Labor of convicts, excavating, hauling, etc., four hundred days, at fifty cents per day.....	200 00
	\$5,613 00

Brick on hand at conclusion of work, one hundred thousand; to which has been added this season, one million nine hundred thousand.

It is safe to say that in addition to the three million thirty-three thousand new brick used, that we used nearly or quite five hundred and fifty thousand saved from the ruins of the burnt buildings,

which, added to the four hundred and fifty thousand on hand, makes the number one million used in the foregoing calculation.

PHYSICIAN'S REPORT.

As to this report, I simply ask that it be read. Its reading will be more satisfactory and instructive than any comments I could make.

MANAGEMENT.

Before closing this already voluminous report, I desire to say: The law passed at the last session of the Legislature changing the management of the State Prison ought to be modified in several particulars. Very true, however, an independent Commission, or Board, not subject to the uncertainties or animosities of party politics, should be the supreme controlling power, the Governor of the State always being one of such Board. The Warden should be responsible to this Board and no one else, and should not be dismissed except for cause. All positions below the Warden should be filled by him, and absolutely controlled by him. If a Warden has incompetent, unfriendly, or dishonest officers or employés, as he may sometimes have, he ought to have the right, and it should be his duty, to discharge them. But, if he cannot discharge them, he ought not to be responsible for their shortcomings. Some attempt should be made, also, to authorize long contracts for labor, and a change should be made in the mode of purchasing supplies.

SUPPLIES.

The present system of obtaining supplies for State institutions, particularly this, ought to be abolished. If the contract system prevails at all, no one should be awarded a contract who is not engaged in the business of buying and selling the articles specified, and more, the contractor or bidder should have a well known and established place of business. The commercial rates as published by the merchants and business men of the City of San Francisco and the State, ought to fix the price of everything bought. This can be carried out for every article used at this institution, except prison cloth and hats for prisoners. The list of goods, with date of delivery, should be submitted to the Auditing Board, whoever that be, and it matters but little, and that Board should carry out the prices and amounts, and order payment. This system would give us a fair article of goods, and prevent the sham merchant and fraudulent speculator from obtaining contracts by which to cheat and defraud the State, at the same time preventing the honest merchant from receiving that public patronage to which a fair course of dealing entitles him. This plan would certainly save money to the State, and it ought to meet the approbation of every man who deals squarely.

I have the honor to be, very respectfully,

JAMES A. JOHNSON,
Warden and Resident Director.

CLERK'S REPORT

FROM JUNE 30, 1875, TO JULY 1, 1877.

L. BARTLETT, - - - CLERK CALIFORNIA STATE PRISON.

TABLE ONE.

Cash receipts per month from July 1st, 1875, to July 1st, 1877.

MONTHS.	Amount.	MONTHS.	Amount.
1875.		1876.	
July -----	\$27,661 79	August -----	5,654 69
August -----	974 89	September -----	7,084 90
September -----	34,698 18	October -----	27,065 66
October -----	7,021 76	November -----	7,302 00
November -----	5,384 41	December -----	43,172 21
December -----	4,978 39	1877.	
1876.		January -----	19,703 38
January -----	30,636 05	February -----	32,392 91
February -----	3,821 24	March -----	15,423 79
March -----	2,143 45	April -----	17,231 61
April -----	62,677 15	May -----	6,521 96
May -----	2,117 06	June -----	5,933 77
June -----	7,690 61	Total -----	\$423,327 81
July -----	46,035 95		

TABLE TWO.

Cash disbursements per month from July 1st, 1875, to July 1st, 1877.

MONTHS.	Amount.	MONTHS.	Amount.
1875.		1876.	
July -----	\$30,213 45	August -----	\$6,206 66
August -----	127 35	September -----	7,134 35
September -----	35,899 28	October -----	27,344 71
October -----	5,647 81	November -----	6,872 95
November -----	5,398 57	December -----	42,392 39
December -----	5,235 09	1877.	
1876.		January -----	19,638 35
January -----	32,167 05	February -----	33,170 38
February -----	4,972 69	March -----	14,763 34
March -----	724 60	April -----	17,078 85
April -----	57,569 20	May -----	6,796 99
May -----	6,495 06	June -----	5,957 25
June -----	9,412 61	Total -----	\$427,002 24
July -----	45,783 26		

TABLE THREE.

Cash Recapitulation from July 1st, 1875, to July 1st, 1877.

On hand July 1st, 1875-----	\$4,742 80
Received from July 1st, 1875, to July 1st, 1877-----	423,327 81
Total-----	\$428,070 61
Disbursed from July 1st, 1875, to July 1st, 1877-----	427,002 24
Remaining on hand July 1st, 1877-----	\$1,068 37

TABLE FOUR.

Cash receipts, showing sources from whence derived, from July 1st, 1875, to July 1st, 1877.

SOURCE RECEIVED FROM.	Amount.	SOURCE RECEIVED FROM.	Amount.
California Furniture Manufac- turing Company-----	\$32,789 35	Profit and loss—old iron sold-----	\$378 50
Stone & Hayden-----	27,108 90	Gate Fund-----	23 06
Porter & Baldwin-----	6,825 70	D. McRadden-----	167 15
United States-----	7,227 00	Building Fund-----	14,827 13
Live stock-----	3,217 61	Wash-house-----	476 87
Interest—commission on silver bought-----	535 04	Medicines-----	46 05
Freight-----	24 52	Prisoners' cash-----	2,518 66
Nevada Bank-----	172,345 14	T. H. Rector-----	72 16
First National Gold Bank-----	13,843 52	Thos. White-----	8 30
State treasury-----	131,321 00	Shoes-----	191 90
Employés of contractors-----	3,090 91	Engines and machinery-----	350 00
Cash sales of merchandise-----	4,040 45	Johnson & Company-----	1,710 48
Labor-----	121 65	Fuel-----	3 00
Huntington, Hopkins & Co.-----	63 76	Total-----	\$423,327 81

TABLE FIVE.

Cash disbursements, showing on what account paid, from July 1st, 1875, to July 1st, 1877.

ON ACCOUNT OF—	Amount.	ON ACCOUNT OF—	Amount.
Merehandise-----	\$252,512 30	Incidental expenses-----	\$1,261 35
Interest-----	8,159 20	Suspense account-----	8,307 05
Discharged prisoners-----	2,354 00	United States-----	170 00
Prisoners' cash-----	553 32	Prison improvements-----	318 00
Subsistence-----	3,951 34	Wagons and harness-----	750 00
Pasturage-----	181 60	Hardware and tools-----	32 25
D. McRadden-----	45 71	Building Fund-----	10,202 51
Jas. E. Ryan-----	216 83	Pipes and fittings-----	316 58
Thos. White-----	88 00	Engines and machinery-----	204 45
T. H. Rector-----	378 48	First National Gold Bank-----	12,029 03
Geo. Johnson-----	1,928 00	Nevada Bank-----	6,115 53
Water-----	24,000 00	Brick account-----	130 00
Profit and loss-----	2,071 67	Jas. P. Smith-----	50 00
Live stock-----	3,313 68	Total-----	\$427,002 24
Salary-----	85,841 73		
Freight-----	1,519 63		

TABLE SIX.

Maintaining cost per month from July 1st, 1875, to July 1st, 1877.

MONTHS.	Amount.	MONTHS.	Amount.
1875.		1876.	
July -----	\$17,693 23	August -----	\$14,522 22
August -----	14,417 32	September -----	16,090 83
September -----	15,663 67	October -----	15,420 70
October -----	15,394 27	November -----	17,014 35
November -----	14,728 09	December -----	17,839 67
December -----	13,702 26	1877.	
1876.		January -----	17,715 12
January -----	15,864 36	February -----	16,121 73
February -----	13,311 04	March -----	18,565 98
March -----	18,415 14	April -----	16,812 01
April -----	17,264 20	May -----	16,409 20
May -----	14,065 40	June -----	17,570 40
June -----	15,329 36	Total -----	\$385,298 10
July -----	15,367 53		

TABLE SEVEN.

Maintaining cost of specified accounts from July 1st, 1875, to July 1st, 1877.

SPECIFIED ACCOUNTS.	Amount.	SPECIFIED ACCOUNTS.	Amount.
Subsistence -----	\$129,401 28	Freight -----	\$1,410 20
Forage -----	8,868 69	Discharged prisoners -----	2,354 00
Clothing -----	19,646 91	Salary -----	107,326 00
Shoes -----	8,256 46	Interest -----	6,946 39
Bed and bedding -----	11,595 72	Wash-house -----	776 95
Medicines -----	5,508 33	Fuel -----	19,828 13
Stationery -----	1,730 57	Discount on Controller's war-	
General use -----	17,701 08	rants -----	1,131 67
Prison improvements -----	15,602 30	Profit and loss -----	1,698 87
Expense account -----	1,514 55	Total -----	\$385,298 10
Water -----	24,000 00		

TABLE EIGHT.

Expenditures per month, other than maintaining cost, from July 1st, 1875, to July 1st, 1877.

MONTHS.	Amount.	MONTHS.	Amount.
1875.		1876.	
July -----	\$196 00	August -----	\$446 51
August -----	110 61	September -----	207 22
September -----	513 06	October -----	510 13
October -----	164 67	November -----	60 87
November -----	466 65	December -----	57 45
December -----	137 74	1877.	
1876.		January -----	653 11
January -----	281 24	February -----	24 75
February -----	462 68	March -----	231 75
March -----	1,221 01	April -----	411 01
April -----	505 71	May -----	1,639 61
May -----	1,751 31	June -----	918 60
June -----	1,202 88	Total -----	\$12,266 57
July -----	92 00		

TABLE NINE.

Expenditures other than maintaining cost of specified accounts from July 1st, 1875, to July 1st, 1877.

SPECIFIED ACCOUNTS.	Amount.	SPECIFIED ACCOUNTS.	Amount.
Ordnance -----	\$316 85	Pipes and fittings -----	\$2,187 70
Live stock -----	3,297 33	Wagons and harness -----	1,025 67
Furniture and crockery -----	2,185 33	Brick account -----	1,015 96
Hardware and tools -----	1,877 82	Total -----	\$12,266 57
Engine and machinery -----	135 99		

TABLE TEN.

Earnings per month from July 1st, 1875, to July 1st, 1877.

MONTHS.	Amount.	MONTHS.	Amount.
1875.		1876.	
July -----	\$5,958 46	August -----	\$2,782 19
August -----	5,972 66	September -----	2,435 16
September -----	5,888 94	October -----	2,255 35
October -----	5,869 91	November -----	2,115 38
November -----	5,688 54	December -----	2,144 80
December -----	5,454 39	1877.	
1876.		January -----	3,436 75
January -----	5,387 58	February -----	2,455 91
February -----	5,037 10	March -----	3,097 32
March -----	1,767 00	April -----	2,797 78
April -----	1,995 83	May -----	3,047 87
May -----	2,560 10	June -----	2,989 29
June -----	2,461 00	Total -----	\$85,883 10
July -----	2,283 79		

TABLE ELEVEN.

Specified earnings from July 1st, 1875, to July 1st, 1877.

EARNINGS.	Amount.	EARNINGS.	Amount.
Support of United States prisoners -----	\$7,356 70	Labor -----	\$76,765 88
Drayage -----	745 00	Total -----	\$85,883 10
Wash-house -----	1,015 52		

TABLE TWELVE.

Income per month, other than earnings, from July 1st, 1875, to July 1st, 1877.

MONTHS.	Amount.	MONTHS.	Amount.
1875.		1876.	
July -----	\$21,569 04	October -----	\$222 32
August -----	1,011 79	November -----	271 70
September -----	25,231 99	December -----	510 49
October -----	208 58	1877.	
November -----	266 87	January -----	26,269 74
December -----	293 77	February -----	128,362 26
1876.		March -----	17,479 92
January -----	25,231 32	April -----	1,272 08
February -----	187 33	May -----	964 39
March -----	841 31	June -----	526 99
April -----	60,173 36	Total -----	\$312,619 15
May -----	231 20	In addition, for sale of medi-	
June -----	312 79	cines in two years -----	88 72
July -----	667 24	Total -----	\$312,707 87
August -----	297 32		
September -----	215 35		

TABLE THIRTEEN.

Specified income, other than earnings, from July 1st, 1875, to July 1st, 1877.

INCOME.	Amount.	INCOME.	Amount.
Sale of merchandise -----	\$7,184 14	Fuel -----	\$3 00
Sale of live stock -----	4,083 66	Sales of medicines -----	88 72
Receipts from State treasury -----	301,071 00	Total -----	\$312,707 87
Repairing shoes -----	232 35		
Brick account -----	45 00		

TABLE FOURTEEN.

Financial statement for month ending June 30th, 1877.

ASSETS.	Amount.	ASSETS.	Amount.
Buildings -----	\$201,784 22	Brickyard -----	1,440 46
Engine and machinery -----	25,063 66	Due by sundry debtors -----	11,182 91
Pipes and fittings -----	10,858 99	Total -----	\$317,810 82
Bed and bedding -----	8,000 00	LIABILITIES.	
Furniture and crockery -----	9,203 91	Merchandise and	
Merchandise -----	12,425 19	deposits -----	\$39,722 14
Reservoirs -----	18,500 00	Bills payable -----	27,390 87
Real estate -----	7,300 00	Total -----	\$67,113 01
Ordnance -----	2,016 85	Excess of assets -----	\$250,697 81
Hardware and tools -----	4,941 82		
Live stock -----	1,591 67		
Wagons and harness -----	2,182 77		
Cash -----	1,068 37		
Medicines -----	250 00		

MEDICAL DEPARTMENT—REPORT.

To the Honorable the Board of Directors for the California State Prison :

In submitting the Biennial Report of matters pertaining to the management of the Medical Department of the State Prison, I confine myself principally to the time commencing when I entered upon the duties of my office, and began a record of its management (the first of January, eighteen hundred and seventy-six). Except of persons admitted to the hospital my predecessor left no record or memoranda from which I can approximate a report embracing the period from the first of July, eighteen hundred and seventy-five, to first of January, eighteen hundred and seventy-six. He, however, informed me that he would cover that period by a report to be made by him to the proper authorities. You are respectfully referred to the accompanying tables, offered as an expose in detail of the sanitary condition of the inmates of the Prison for the time mentioned, and to aid you in arriving at a correct knowledge of the same.

At the time of the burning of a portion of the State Prison buildings, February twenty-eighth, eighteen hundred and seventy-six, the cell room capacity was taxed beyond the limits ordinarily calculated as necessary for health. With the destruction of the workshops one hundred and sixty-eight Chinese were deprived of sleeping quarters, and these, together with the monthly increase of convicts, were of necessity placed in the already overcrowded cells, filling them to double the number intended in their construction. This state of affairs continued, each day adding to the difficulty, until twenty-sixth December, eighteen hundred and seventy-six, when sleeping quarters were furnished for the Chinese, and on March eleventh, eighteen hundred and seventy-seven, further relief was afforded by the completion of an additional story to Cell Building Number One, affording accommodations for one hundred and ninety-two persons, and yet the rooms and a portion of the cells remain over-full. This condition of the Prison necessitated the exercise of the utmost vigilance on the part of the officers in charge in regard to premonitory symptoms of disease, constant and free use of disinfectants, and scrupulous attention to the cleanliness of the persons of the prisoners, their bedding and cells, the soil deposits, and sewerage. Notwithstanding our attention to these things, we could not reasonably expect to have escaped an epidemic in some form, if it were not that we were aided by the most favorable climate in the world, and a location affording on three sides of the Prison a sea breeze, not contaminated by smoke, dust, or any other deleterious agent, and seldom visited by fogs. In connection with this branch of the subject, for the further elucidation of the same, I will submit an extract from the report of Dr. Joseph T. Montgomery, Chairman of the Committee on Public Hygiene and State Medicine, and member of the State Board of Health, made to the State Medical Society, and published in their "transactions" for eighteen hundred and seventy-seven :

To Dr. I. E. Pelham, Physician to that important State Institution (San Quentin State Prison) we are under many obligations for a full description of its location, topography, buildings, sewers, and water supply, illustrated by a well drawn map, exhibiting clearly and satisfactorily all the desirable information that such drawings can convey.

From this map and the accompanying copious notes, setting forth the general arrangements and sanitary provisions in operation, we have gathered such knowledge of facts as to satisfy us that the site, in a sanitary point of view, could not well be excelled, as it combines all the conditions and advantages calculated to insure perfect health to its inmates, both officers and prisoners. It is located on the narrow point of a peninsula that extends four miles into the Bay of San Francisco, on ground sufficiently elevated and sloping to admit of thorough drainage. The authorities, availing themselves of these advantages, have constructed three several sewers, all of which discharge into the bay at different points, at such a distance from shore as to prevent the return to it of the discharged sewage. Into one of these sewers, the largest of the number, at a point one hundred and fifty feet from the shore, and within the prison walls, is a man-hole, into which all the night soil collected in the cells and prison-rooms of the prison proper is emptied. * * * From this point all this large collection is conveyed, through a tunnel of ample capacity, and with a fall of one foot in five, into the bay, a good head of water being let on to assist the operation.

For all other buildings proper sewerage is provided, including what is required to drain off the surface water from the grounds generally: while the workshops, the hospital, and all buildings designed for other purposes than the confinement of prisoners, are provided with water-closets, connected, by iron pipes from story to story, with the sewers, each tier of these closets being supplied with a four-inch iron pipe, extending twelve feet above the roof, to afford escape to noxious gases. All these sewers and closets have an ample supply of water, which is used without stint. The water supplied to the institution for all purposes is of good quality, brought from a mountain stream twelve miles distant, by a ditch which discharges in a reservoir located at an altitude sufficient to give it all the power or pressure desirable for any purpose. These water works belong to a corporation, and the prison authorities contract for the water needed at a stipulated sum per month. * * *

The general sanitary arrangements of the institution are clearly admirable, and its salubrity undoubted, the proof of the correctness of these assertions being the enjoyment by the inmates of an unusual immunity from disease, particularly from that of a zymotic character.

The death rate for the year was sixteen and one-half per cent. per one thousand persons; but only five per cent. of the total mortality, it is claimed, was by diseases regarded as curable. * * *

As a special misfortune and disadvantage that befell the institution the past year, the destruction by fire of the principal workshops, including quarters for nearly two hundred prisoners, may be mentioned. This accident necessitated the extreme crowding of the remaining buildings, previously filled to repletion, until those destroyed could be restored, which required nearly the entire year. This overcrowding necessarily operated to curtail and contaminate the air allowed to each prisoner, and to cause with all, besides the inhalation of impure air, excessive perspiration and depression, as the effect of the closeness and high temperature of the cells, produced by the accumulated animal heat radiating from the bodies of those crowded into them. While in this condition in the morning, after a night spent as stated, these people were suddenly precipitated into a damp atmosphere of much lower temperature. This sudden transition led to many cases of derangement, more or less of the digestive organs, and to inflammation of some part of the respiratory organs, in some cases resulting in death, particularly with those previously debilitated by other diseases and causes. Under all circumstances, therefore, as detailed the death rate was really quite low.

For the wisdom and fidelity displayed by the Directors in the discharge of the responsible trusts imposed upon them by law, the skill evinced, and the success achieved by the architect in the reconstruction of the buildings destroyed, and the general efficiency shown by the officers in carrying out the designs and regulations entrusted to them for execution while in the discharge of their respective duties, they are all entitled to much praise; and we think that we can well point to this public institution as a model establishment of its kind.

On the twenty-eighth of May last, a prison rule was adopted, confining to their prison sleeping-quarters during day and night all convicts not engaged in some employment or occupation, which resulted in the locking up of over five hundred persons each day twenty-two hours of the twenty-four. The enforcement of this order began so recently, that I can not speak from actual demonstration of the injury to health resulting. The immunity of the prisoners from zymotic diseases, as a consequence resulting from our overcrowded cells, is mainly due, after considering the preventives to which reference has been made, to the fact that they were required to breathe pure fresh air in the light of day, on an average of at least nine hours in each day.

The upper tier of cells in building Number One are amply ventilated by the adoption, in their construction, of the latest improved plans for the purpose; but its middle tier, and all the cells in buildings Numbers Two and Three, are not sufficiently ventilated, and from their construction cannot, without too great expense, be so made, to admit of convicts being confined in them day and night without serious detriment to their health. By constant attention, as before stated, we have succeeded in preventing the introduction of any serious maladies consequent upon close confinement, contaminated air, etc.; but as taught by the laws of hygiene and the lesson of experience we cannot reasonably hope, under the operation of this arrangement, to be so fortunate in the future. It is simply at variance with reason and common sense. I deem it my duty to call your attention to this matter as one demanding your serious attention, from the consideration of humanity, economy, and policy.

I also call your attention to the insufficiency of the hospital building for the uses intended: In case of an unusual amount of sickness from any cause it would be fatally inadequate to the demand. It is singularly destitute of the necessities, the conveniences, and the material usually considered essential for such an institution. The building is fifty-three by thirty-six feet, two stories, with a hall in the center six feet wide dividing each story into two rooms, one of which on the first floor is used for a kitchen, and the other as a prison room. The hall accommodates a flight of stairs which leads to the second story, which is divided into two rooms, each with a capacity of thirty-three by twenty-one and a half feet. In a space eight and a half by six feet at the head of the stairs is partitioned off a room six by four and a half feet which is used for a water-closet with two apertures, urinal, wash-room for personal ablutions, and the faucet in the water pipe that supplies the wards. It is only necessary to mention these facts to make manifest the absurdity of this arrangement, as well as its utter disregard of the simplest rules of health. A space in the hall, in the upper story, and just over the flight of stairs, affords a room fifteen and three-quarters by six and one-quarter feet which is used as an office and dispensary, the first nine feet being the office. The entrance to this department is up the flight of stairs mentioned, and through the full length of one of the wards. To this office, with coarse shoes or boots, and the heavy walk of laborers, is admitted daily from forty to sixty persons to visit the Physician for excuse from labor and prescription for disease. In each of the wards in close proximity to the cots of the sick, be their disease what it may, the dining table is set as a matter of necessity. There is no provision for hot or steam baths, and the accommodation for cold ones is very shabby.

This ill-conditioned building, for the care of the sick, was handed down as an heir-loom from one administration to another, until the present officers were placed in charge. Soon after that time the great misfortune caused by the fire was precipitated upon us. This created the necessity of using all the funds and labor at your command upon objects considered of far more importance than the reconstruction of the hospital. But now that all these exigencies are provided for, or will be in the immediate future, it seems to me to be necessary that you do not delay in placing this part of the Prison upon a reasonable footing.

The Prison is destitute of proper accommodations for the insane.

During the last two years we have had twenty cases, six of which have been sent to the Insane Asylum, five have recovered, and nine remain on hand. It is an unavoidable necessity that insane cases when they appear should be retained in prison for a time in order to prove them, for their diagnosis is so difficult that the science and skill of the most experienced physicians will often be at fault. The conductors of our Insane Asylums, on account of the extra vigilance necessary to be exercised to prevent escapes, are probably disposed to discourage the introduction of insane criminals into their wards. Therefore, as the Prison must of necessity be custodian of insane persons for a time, it seems to me that it is just a simple duty that proper provision should be made for their care and management. At present they are confined in cells in the main cell buildings, and are not separated from the other prisoners, except by the cell walls, and they often render night hideous by their ravings, thus disturbing the sleep of those who must labor during the day. To avoid this state of affairs there is at present but one remedy—the dungeon—which has frequently to be used for the purpose. With present accommodations for treatment of such cases results are unsatisfactory, and remedial measures cannot be resorted to with reasonable prospects of success.

The sleeping apartments assigned to the night guards are not sufficient in space or ventilation for the demands of health, and the main draught of air that reaches them is blown over the surface-drainage of the kitchen and a contiguous lot of old decaying shed-rooms about two hundred feet in length, that stand against the outside of the south part of the east Prison wall, their contents adding to the impurity of the atmosphere. It is necessary that these sleeping rooms should be less crowded and better ventilated, and that the old buildings referred to, together with the officers' water-closet, be removed, and that different arrangements be made for the vegetable depot, which at present is one of the shed-rooms mentioned.

I approach the only remaining subject, to which I will refer with hesitancy and diffidence on account of its magnitude and the difficulties surrounding it. The question presented in determining the best mode of conducting the State Prison is one of great interest to the taxpayer, law-giver, philanthropist, and the Christian. The rapid increase in the number of criminals, affording, as it does, a ratio that will give in a few years an army of convicts in the State Prison, who are being daily discharged by reason of expiration of their sentences, a large per cent. of whom will soon return, with fresh crimes to expiate, are items of interest in the study of the question. It is lamentable to witness the daily opening of the Prison gates for the discharge of convicts by expiration of sentence, and for the admission of others steeped in fresh crime, who in their turn will be thrown upon the community, when we reflect that a large majority of them are wedded to crime as a profession; and it does not detract from the sadness of the scene when we find so many of them are young men. When a view is had of this large mass of depraved humanity, numbering, as it does, over thirteen hundred souls, and largely increasing, the thought naturally occurs: Can nothing be done to reclaim them? Is it a necessity that they be given over to crime and iniquity, as irreclaimable and totally depraved? In answering this question, the first difficulty in solving the problem that presents itself to my mind is one of expense. It would seem

that the day is rapidly approaching when the burden of supporting this large criminal element will be so great, be the management ever so economical, that a demand will become almost universal for it to be made to approximate, in its management, a self-sustaining affair. This can only be done by the introduction of various branches of mechanical labor for the employment of the convicts; and then we encounter some of the difficulties of the case in the form of opposition to the system from the mechanics of the State, on account of competition. The plan (as I am informed) adopted by the State of Pennsylvania in the management of its State Prison, has for its object, almost exclusively, reformation, regardless of expense, each convict being confined in a single cell day and night; and so rigidly is the rule enforced that a discharged prisoner would not recognize his next-door neighbor, though they may have occupied adjoined cells for a number of years.

Intimately connected with this subject, is a question of health and of moral depravity, and for the purpose of reaching it I have referred to the matter. The great evil presenting itself for remedial action in prison life is self-abuse, a vice that undermines the constitution and debases the moral instincts more than all other causes combined. It kills body and soul; and if the subject of this vice is so fortunate as to serve out his sentence, he returns to the community a fit subject to adopt crime as a profession for life. This disgusting vice exists as a primary cause of the principal diseases with which convicts are afflicted, and to repair the resulting injury is the principal study of the Prison Physician; and its eradication is also of primary importance in a moral point of view.

To meet and control this great vice, with the present system of the management of the Prison, is a herculean task, and will tax a physician beyond his abilities. Idleness is one of its great instigators; and if the mind be occupied with a daily vocation, accompanied with labor and healthful exercise, one is not apt to contract the habit. The present number of idle convicts is not likely to be diminished under the present contract system, for the increase in their numbers by new arrivals will probably keep pace with the number employed on new branches of industry, calling for contract labor, that may be introduced in the future.

As a curative and preventive measure to meet the question, as present advised, I can recommend no more effective plan than the system adopted in the Pennsylvania State Prison, to which I have heretofore referred—it appearing to me ample to meet both phases of the subject. The question of cost standing as a great bar to the adoption of this plan, I recommend the next best course to pursue in an effort to abate the evil, the abolishment of all the rooms used as sleeping quarters and the providing of a single cell for each convict. To this add provisions for constant employment and you will have afforded the physician an opportunity to exercise his skill in an effort towards eradicating this vicious habit under circumstances so favorable that it would promise great amelioration for the present and complete success in the future.

The question of morals and reformation in the management of the Prison is of so great magnitude that one could not be expected to give it more attention than a mere glance in a report of the character that I am expected to make, even if it be in my province to

enter upon it at all, and I have not intended, in the reference made, to do more than give food for the thought. But surely in this enlightened age, when the power in the hands of the Legislature is so ample, and the right to exercise it so undoubted, the cause of humanity, as well as the welfare of the body of the people, and the interest of good government, would seem to demand that this question be promptly met by appropriate legislation, and not be handed down from administration to administration in the future, as it has been in the past, with so poor an effort made towards the reformation of the convicts.

All of which is most respectfully submitted.

J. E. PELHAM, M. D.,
Surgeon and Physician, State Prison.

San Quentin, July 1st, 1877.

BIENNIAL REPORT—PREVALENT DISEASES, ETC., CALIFORNIA STATE PRISON.

DATE.	Bright's Disease	Structural Disease of Heart	Functional Disease of Heart	Diseases of Liver	Typhoid Fever	Remittent Fever	Intermittent Fever	Lumbago	Periodic Rheumatism	Chronic Rheumatism	Acute Rheumatism	Diphtheria	Other Diseases of Stomach and Bowels	Hemorrhoids	Chronic Diarrhoea	Acute Diarrhoea and Dysentery	Catarrh	Influenza	Parotiditis	Other Diseases of Respiratory Organs	Pneumonia	Pleurisitis	Bronchial Consumption	Phthisis Pulmonalis	Totals
Quarter ending September 30th, 1875*		1			1		1	4		1	1		4		3	11		10		14	1	2		3	
Quarter ending December 31st, 1875		1			1		1	4		3	16		13		12	14		12		13	1	1		4	
Quarter ending March 31st, 1876		1	8			2	10	1	1	3	16	3	13	10	107	6	2	13	15	33	1	1		2	
Quarter ending June 30th, 1876		1	7			4	11	1	1	4	14	1	14	5	132	6	60	32	31	17	8	1		1	
Quarter ending September 30th, 1876		2	3			2	10	9	1	2	13	2	2	4	103	10	63	10	40	17	16	1		2	
Quarter ending December 31st, 1876		1	6			4	10	9	2	1	13	1	4	8	30	2	40	30	1	16	1	1		2	
Quarter ending March 31st, 1877		2	3			1	11	5	4	1	12	3	5	4	47	64	40	22	4	11	5	6		3	
Quarter ending June 30th, 1877		2	13			6	11	5	1	4	12	1	5	1	40	1	14	22	1	1	5	1		3	
Totals		12	46	11	2	19	49	41	9	3	87	10	28	28	312	312	39	463	54	112	7	12	3	17	

DATE.	Unclassified†	Tumors	Suicide	Contusions, Sprains, and Wounds	Gunshot Wounds	Capital Amputations	Fracture	Sunstroke	Varicella	Small-pox	Ascaris Lumbricoides	Teenia Solium	Lupo-mania	Insanity	Diseases of Nerves	Diseases of Arteries and Veins	Skin Diseases	Stricture	Other Diseases of Gen- ito-urinary Organs	Hernia Femoral	Secondary Syphilis	Primary Syphilis	Disease of Kidneys	Totals
Quarter ending September 30th, 1875*				6			2							3					1	1		4		
Quarter ending December 31st, 1875		1		5	1	1								1		1			2	1	5			5
Quarter ending March 31st, 1876				23				1				2		10		7	2		4	2	12	1		1
Quarter ending June 30th, 1876				42	1	1								7		3	3		3	3	13	1		1
Quarter ending September 30th, 1876				30			2				1			6		1	1		1	3	1	1		1
Quarter ending December 31st, 1876		1		23	1		1				1	1	1	14		1			3	3	10	2		1
Quarter ending March 31st, 1877				61		1								16					2	2	2	1		1
Quarter ending June 30th, 1877		1		196	4	3	5	1	3	2	3	3	1	20	57	10	6	6	19	15	52	5		8
Totals		4	1	4	4	3	5	3	3	2	3	3	1	57	10	10	6	6	19	15	52	5		8

* Only patients in Hospital are enumerated during first and second quarter, owing to incompleteness of my predecessor's records. † Unclassified diseases embrace cases of indisposition requiring prescription, but of so light a character as not to demand a particular diagnosis, such as coughs, colds, constipation, etc. ‡ Twenty cases during two years ending June 30, 1877.

DEATHS.

Nativity.	DISEASE.	Date.
Chinese	Typhoid fever	September 2d, 1875.
Spanish	Fractured skull	September 5th, 1875.
American	Bilious fever	September 11th, 1875.
Spanish	Fractured skull	September 12th, 1875.
Chinese	Phthisis pulmonalis	September 15th, 1875.
American	Typhoid fever	November 19th, 1875.
Irish	Phthisis pulmonalis	December 12th, 1875.
Indian	Congestion of lungs	February 24th, 1876.
Indian	Parotiditis	April 16th, 1876.
Spanish	Intermittent fever	April 18th, 1876.
Spanish	Phthisis pulmonalis	April 28th, 1876.
Indian	Hyperemia of lungs	April 24th, 1876.
Indian	Secondary syphilis	May 6th, 1876.
American	Peritonitis	May 18th, 1876.
Spaniard	Phthisis pulmonalis	June 18th, 1876.
American	Malignant small-pox	June 20th, 1876.
Chinese	Ascites	June 21st, 1876.
French	Rupture of pulmonary artery	July 11th, 1876.
German	Diarrhoea	September 4th, 1876.
French	Diarrhoea	October 3d, 1876.
Irish	Fractured skull	October 19th, 1876.
Dutch	Diabetes mel.	November, 6th, 1876.
American	Aneurism of heart	December, 19th, 1876.
American	Pleuro-pneumonia	January 27th, 1877.
Indian	Bronchial consumption	February 3d, 1877.
American	Fele de se	February 12th, 1877.
Spaniard	Phthisis pulmonalis	March 28th, 1877.
American	Phthisis pulmonalis	April 30th, 1877.
American	Rheumatism of heart	April 10th, 1877.
Spaniard	Phthisis pulmonalis	May 18th, 1877.
Chinese	Punct wound	May 6th, 1877.
Indian	Phthisis pulmonalis	June 21st, 1877.

Average number of prisoners	1,186
Percentage of deaths to sick	1.00

SURGEON'S BIENNIAL REPORT

Of California State Prison, ending June 30th, 1877.

	Quarter ending Sept. 30, 1875.	Quarter ending Dec. 31, 1875.	Quarter ending Mar. 31, 1876.	Quarter ending June 30, 1876.	Quarter ending Sept. 30, 1876.	Quarter ending Dec. 31, 1876.	Quarter ending Mar. 31, 1877.	Quarter ending June 30, 1877.	Total for the two years.
Patients treated inside of Hos- pital	69	62	60	57	44	47	48	29	416
Patients treated outside of Hos- pital			449	529	469	415	442	475	2,779
Total	69	62	509	586	513	462	490	504	3,195
Patients admitted into Hos- pital	69	24	11	32	26	24	32	15	233
Patients discharged from Hos- pital	26	11	23	30	19	27	30	8	174
Number of deaths	5	2	1	9	2	4	4	5	32



TURNKEY'S BIENNIAL REPORT.

TABLE I.
Prison Account from 1851 to July 1st, 1877.

[illegible]

TABLE II.
Recapitulation of Received and Discharged Prisoners from July 1st, 1875, to July 1st, 1877.

MONTHS.	Prisoners Received by Order of Court	Pardons Revoked	Escapes Recaptured	Returned from Insane Asylum	Total Receipts	Discharged by Secretary of Navy	Pardoned by the Presi- dent	Pardoned by the Gov- ernor	Discharged per Act and Restored	Discharged per Act	Died and Killed	Escaped	Sent to Insane Asylum	By Order of Court	Total Discharges	Number of prisoners remain- ing on hand at the close of each month.
1875.																
July	27				27			3	19	13		1		3	39	July 31
August	50				50			3	21	5				3	32	August 31
September	42				42			15	17	9	4			2	47	September 30
October	39		1		40			8	35	9				2	54	October 31
November	51				51			9	9	12	1			3	34	November 30
December	41				41			5	16	12	1			6	40	December 31
1876.																
January	46				46				26	3				2	31	January 31
February	47		1		48			4	14	9	1		4	4	36	February 29
March	55		1		56			1	18	6		1		10	36	March 31
April	50				50	1		1	24	8	4			1	39	April 30
May	47				47			9	15	1	2	1		2	30	May 31
June	18		1	1	20			8	40	9	2			4	63	June 30
July	25	1			26			1	18	13	2	1		1	36	July 31
August	64		2		66				18	18		3		3	42	August 31
September	58				58	2		4	20	4	1	2		4	37	September 30
October	35				35			1	17	13	2	3			36	October 31
November	32		1		33		1	1	12	8	1			4	27	November 30

December	56					56		1	12	8	1		1	2	25	December 31	1,196
1877.																	
January	54					54		6	16	14	1			5	42	January 31	1,208
February	44					44		5	17	8	2			1	33	February 28	1,219
March	64					64		3	12	9	1	1		3	31	March 31	1,252
April	76					76		3	18	6	2			7	36	April 30	1,292
May	58					59		4	22	10	2			3	41	May 31	1,310
June	49					49		1	17	18	1			4	41	June 30	1,318
Totals	1,128	1	7	2		1,138	3	2	453	225	31	13	6	79	908	Monthly average	1,161

RECAPITULATION

Of Received and Discharged Prisoners, from July 1st, 1875, to July 1st, 1877.

On hand June 30th, 1875.....	1,088
Received from July 1st, 1875, to July 1st, 1877.....	1,138
Total	2,226
Discharged under the Act.....	225
Restored under the Act.....	453
Pardoned by the President.....	2
Pardoned by the Governor.....	96
Sent to the Insane Asylum.....	6
Discharged by order of Court.....	79
Discharged by Secretary of Navy.....	3
Died in Prison.....	31
Escaped from Prison.....	13
Total	908
On hand June 30th, 1877.....	1,318
Increase in two years.....	230

TABLE III.
Nativity of Prisoners.

NATIVITY.	Number.	NATIVITY.	Number.
<i>States and Territories.</i>		<i>Foreign.</i>	
Alabama	6	Austria	4
Arkansas	8	Australia	6
Alaska Territory	1	Belgium	1
California	157	China	197
Connecticut	11	Canada	24
Delaware	4	Chili	10
Florida	2	Central America	2
Georgia	7	Denmark	3
Illinois	23	East Indies	1
Indiana	10	England	65
Iowa	4	France	21
Kentucky	21	Germany	53
Louisiana	12	Greece	2
Maine	12	Holland	2
Maryland	16	Ireland	117
Michigan	13	Italy	11
Massachusetts	40	Mexico	43
Missouri	39	Manilla	1
Minnesota	1	Nova Scotia	1
Mississippi	1	Newfoundland	2
New Hampshire	6	Portugal	7
New York	154	Poland	3
New Jersey	14	Russia	3
North Carolina	2	Prussia	5
Ohio	26	South America	2
Oregon	3	Sweden and Norway	10
Pennsylvania	45	Switzerland	4
Rhode Island	4	Scotland	13
South Carolina	7	Spain	4
Tennessee	9	Wales	6
Texas	3	West Indies	4
Utah Territory	1		
Vermont	6	Total	627
Virginia	14		
West Virginia	1	United States	691
Wisconsin	5	Foreign	627
District Columbia	1		
New Mexico Territory	1	Total	1,318
Washington Territory	1		
Total	691		

TABLE IV.
Classification of Crimes.

CRIME.	Number.	CRIME.	Number.
Arson	3	Forgery and felony	49
Arson, first degree	7	Forgery and grand larceny	1
Arson, second degree	3	Felony and robbery	2
Attempt to commit arson	1	Grand larceny and robbery	1
Accessory to murder	1	Grand larceny	270
Assault to murder	48	Grand larceny and house-breaking	8
Assault to rape	14	Grand larceny and prior conviction	2
Assault to rob	35	House-breaking	40
Assault to murder and grand larceny	2	House-breaking, second offense	1
Assault with deadly weapon	21	House-breaking and robbery	1
Attempt at burglary	19	Incest	2
Attempt to rape	6	Incest and abortion	1
Attempt at grand larceny	6	Kidnaping	1
Assisting prisoner to escape	1	Larceny	5
Burglary	287	Murder	13
Burglary, first degree	11	Murder, first degree	29
Burglary, second degree	22	Murder, second degree	101
Burglary and grand larceny	17	Manslaughter	56
Burglary and robbery	1	Mayhem	2
Burglary and assault to rape	1	Rape	10
Burglary and prior conviction	2	Robbery	145
Burglary and house-breaking	1	Perjury	6
Crime against nature	1	Petty larceny and prior conviction	16
Counterfeiting	6	Poisoning horses	1
Embezzlement	18		
Forgery	21	Total	1,318

TABLE V.
Term of Imprisonment.

TERM.	Number.	TERM.	Number.
Eight months	1	Eight and ten-twelfth years	2
One year	78	Nine years	16
One and one-third years	1	Nine and one-half years	15
One and one-half years	99	Ten years	100
One and two-third years	3	Ten and one-half years	1
One and three-quarter years	1	Ten and one-quarter years	1
Two years	95	Eleven years	5
Two and one-third years	1	Eleven and one-half years	1
Two and one-quarter years	2	Twelve years	22
Two and one-half years	62	Twelve and one-half years	1
Two and three-quarter years	2	Thirteen years	6
Two and ten-twelfth years	1	Fourteen years	21
Three years	118	Fourteen and one-half years	3
Three and one-quarter years	1	Fifteen years	31
Three and one-half years	22	Fifteen and one-quarter years	1
Three and three-quarter years	1	Seventeen years	1
Three and ten-twelfth years	1	Seventeen and one-half years	1
Four years	126	Eighteen years	5
Four and one-twelfth years	2	Eighteen and one-half years	1
Four and one-third years	1	Twenty years	6
Four and one-half years	15	Twenty-one years	4
Four and two-third years	1	Twenty-two years	2
Five years	160	Twenty-four years	4
Five and one-half years	13	Twenty-four and one-half years	1
Five and ten-twelfth years	2	Twenty-five years	11
Six years	65	Twenty-seven and one-half years	1
Six and one-quarter years	1	Thirty years	5
Six and one-half years	5	Forty-five years	3
Seven years	56	Fifty-one years	2
Seven and one-half years	10	Life	59
Eight years	39		
Eight and one-half years	1	Total	1,318

TABLE VI.

Age of Prisoners.

AGE.	Number.	AGE.	Number.
Fourteen years	1	Forty-two years	37
Fifteen years	2	Forty-three years	14
Sixteen years	11	Forty-four years	10
Seventeen years	24	Forty-five years	17
Eighteen years	49	Forty-six years	10
Nineteen years	50	Forty-seven years	10
Twenty years	59	Forty-eight years	6
Twenty-one years	57	Forty-nine years	12
Twenty-two years	63	Fifty years	5
Twenty-three years	59	Fifty-one years	1
Twenty-four years	49	Fifty-two years	6
Twenty-five years	82	Fifty-three years	5
Twenty-six years	79	Fifty-four years	4
Twenty-seven years	56	Fifty-five years	9
Twenty-eight years	81	Fifty-six years	4
Twenty-nine years	41	Fifty-seven years	3
Thirty years	68	Fifty-nine years	1
Thirty-one years	39	Sixty years	4
Thirty-two years	46	Sixty-one years	1
Thirty-four years	32	Sixty-three years	1
Thirty-five years	41	Sixty-five years	1
Thirty-six years	29	Sixty-seven years	1
Thirty-seven years	31	Seventy-three years	1
Thirty-eight years	32	Seventy-nine years	1
Thirty-nine years	23		
Forty years	37	Total	1,318
Forty-one years	13		

TABLE VII.

Educational abilities of prisoners.

Read and write	985
Neither read nor write	309
Read and can't write	24
Total	1,318

TABLE VIII.

Number of Prisoners from each County.

COUNTY.	Number.	COUNTY.	Number.
Alpine	2	San Diego	12
Alameda	46	San Francisco	455
Amador	17	San Joaquin	48
Butte	22	San Luis Obispo	5
Calaveras	15	San Mateo	17
Colusa	11	Santa Barbara	12
Contra Costa	10	Santa Clara	43
El Dorado	24	Santa Cruz	13
Fresno	15	San Benito	9
Humboldt	9	Shasta	18
Inyo	3	Sierra	1
Kern	27	Siskiyou	8
Lake	7	Solano	25
Lassen	2	Sonoma	38
Los Angeles	55	Stanislaus	16
Marin	10	Sutter	1
Mariposa	3	Tehama	10
Mendocino	15	Trinity	5
Merced	11	Tulare	13
Monterey	24	Tuolumne	5
Napa	19	Ventura	8
Nevada	20	Yuba	27
Placer	22	Yolo	20
Plumas	3		
Sacramento	97	Total	1,318
San Bernardino	20		

TABLE IX.

Occupation of prisoners when sentenced.

OCCUPATION.	Number.	OCCUPATION.	Number.
Artist	1	Lithographer	1
Baker	11	Moulder	1
Brickmaker	2	Miner	36
Bricklayer	5	Merchant	7
Butcher	23	Miller	1
Bookkeeper	12	Marble cutter	3
Barkeeper	12	Machinist	4
Barber	19	Mattress maker	1
Blacksmith	13	Milliner	1
Boiler maker	3	Musician	2
Brushmaker	2	Nail cutter	1
Boxmaker	1	Oil finisher	1
Book-folder	1	Pressman	1
Boat builder	1	Printer	6
Cook	93	Plumber	3
Carpenter	27	Peddler	1
Cigar maker	15	Potter	1
Capitalist	1	Paper hanger	1
Clerk	24	Plasterer	4
Currier	2	Painter	21
Caulker	1	Physician	3
Cabinet maker	6	Railroad agent	1
Carriage trimmer	1	Ship carpenter	1
Cooper	2	Sash maker	1
Cutter	1	Seamstress	2
Circus rider	1	School teacher	1
Druggist	5	Stone mason	1
Draughtsman	1	Saw repairer	1
Dentist	1	Sailor	42
Engineer	10	Steward	2
Engraver	2	Servant	3
Farmer	69	Stage driver	1
Fisherman	1	Silversmith	1
Furrier	1	Stone cutter	5
Fireman	8	Sport	2
Gambler	2	Shoemaker	28
Gardener	8	Sailmaker	3
Gasfitter	7	Teamster	27
Glazier	1	Tailor	12
Gentleman	1	Theatrical agent	1
Gunsmith	2	Telegraph operator	2
Harness maker	4	Trunk maker	1
Hostler	11	Upholsterer	2
Hatter	3	Vaquero	27
Hotel keeper	1	Washman	45
Horse jockey	1	Wheelwright	2
Hack driver	1	Waiter	31
Interpreter	1	Weaver	1
Locksmith	1	Wagon maker	1
Lather	2	Whip maker	1
Laborer	545		
Lumberman	1	Total	1,318

TABLE X.
Number of Terms.

TERMS.	Number.
Prisoners serving their first term -----	950
Prisoners serving their second term -----	256
Prisoners serving their third term -----	67
Prisoners serving their fourth term -----	27
Prisoners serving their fifth term -----	15
Prisoners serving their sixth term -----	3
Total -----	1,318

TABLE XI.

Statement of clothing, etc., issued to convicts by Turnkey's Department from July 1st, 1875, to June 30th, 1877.

DATE.	PANTS.		SHIRTS.		Shoes	Hats	Blankets	Repairs
	Woolen	Citizen	Woolen	Citizen				
July, 1875 -----	159	28	160	32	201			39
August, 1875 -----	193	18	196	21	215			29
September, 1875 -----	183	13	186	25	211			17
October, 1875 -----	203	25	193	47	296			27
November, 1875 -----	177	23	182	22	200			15
December, 1875 -----	159	17	165	34	183			13
January, 1876 -----	223	15	215	17	244			13
February, 1876 -----	198	33	168	58	182			7
March, 1876 -----	250		186	55	171	144		17
April, 1876 -----	318	9	295	49	231	213		23
May, 1876 -----	213		203	52	199	164		75
June, 1876 -----	123	15	115	103	180	117		42
July, 1876 -----	171	13	169	36	176	115		32
August, 1876 -----	192	19	192	46	188	163		28
September, 1876 -----	179	3	211	28	200	118	112	29
October, 1876 -----	251	9	188	45	218	102	32	45
November, 1876 -----	190	6	196	20	186	113	73	33
December, 1876 -----	236	5	241	27	124	115	121	41
January, 1877 -----	253	5	267	18	179	129	106	65
February, 1877 -----	198		188	15	182	109	89	50
March, 1877 -----	264	1	258	27	191	180	116	44
April, 1877 -----	264	1	247	24	189	116	110	42
May, 1877 -----	270	1	249	44	202	123	90	47
June, 1877 -----	235	3	222	51	190	154	70	29
Totals -----	5,102	262	4,892	896	4,738	2,175	919	802

Respectfully, etc.,

CHARLES AULL,
Turnkey.

SEVENTH BIENNIAL REPORT

OF THE

Superintendent of Public Instruction

OF THE

STATE OF CALIFORNIA,

FOR THE

SCHOOL YEARS 1876 AND 1877.



SACRAMENTO:

STATE OFFICE : : : F. P. THOMPSON, SUPT. STATE PRINTING.

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ADDENDUM.

Fanny E. Bennette holds a Life Diploma, issued in eighteen hundred and sixty-nine.

DEPARTMENT OF PUBLIC INSTRUCTION, }
SACRAMENTO, November 1st, 1877. }

To His Excellency,
WILLIAM IRWIN,
Governor of California:

SIR: In accordance with the requirements of section one thousand five hundred and thirty-two of the Political Code, I have the honor to submit to your Excellency the Seventh Biennial Report of the Superintendent of Public Instruction, for the school years ending June thirtieth, eighteen hundred and seventy-six, and eighteen hundred and seventy-seven.

Very respectfully, your obedient servant,

EZRA S. CARR,
Superintendent of Public Instruction.



REPORT.

The limitation of official reports, by Act of the Legislature of eighteen hundred and seventy-five and six, necessarily excludes the details of progress in the several counties, with many valuable suggestions from the County Superintendents, a statement of the condition of the State University, the State Normal School, Deaf, Dumb, and the Blind Asylum, and the school reports of the various charitable institutions of an educational character which receive assistance from the public funds.

The county reports all show a commendable progress, marked improvement in the efficiency of county supervision, also in school houses and furniture. Many excellent new buildings have been erected in country neighborhoods in the remote parts of the State. At Chico, Oroville, and other places, the introduction of industrial drawing has "more than met expectations." The following, from Hon. C. R. Beal, of Calaveras County, may be taken as a typical report:

With a decrease in the census list, the number of scholars has gained eighty, the length of school time increased three-eighths of a month on an average, and, proportionately, the wages of teachers. Twenty-five more visits were made by the County Superintendent, four more by School Trustees, and one hundred and four more by other persons than during any previous year. Our Teachers' Institutes have increased in interest and attendance.

The present school population of California, or number of children between the ages of five and seventeen years of age, is two hundred thousand and sixty-seven; the number enrolled in the public schools, one hundred and thirty-five thousand three hundred and thirty-five, with an average daily attendance of eighty-nine thousand five hundred and thirty-nine.

The present number of teachers in the public schools is three thousand one hundred and sixty-seven. Of this number one thousand one hundred and eighty-four are men, and one thousand nine hundred and eighty-three women.

It is believed that at no time in the history of the State have the teachers been as well qualified, or more earnest and zealous in their work.

The total income for school purposes from all sources during the past year was three million six hundred and twelve thousand one hundred and sixty-three dollars and thirty-two cents; total expenditure was two million seven hundred and forty-nine thousand seven hundred and twenty-nine dollars and forty-six cents. The valuation of school property is five million nine hundred and thirty-three thousand two hundred and forty-three dollars and sixty-four cents. If we allow ten per cent. for its use (amounting to five hundred and

ninety-three thousand three hundred and twenty-four dollars and thirty-six cents), the total expenditure or annual investment of the State in public education, exclusive of the cost of text-books, is three million three hundred and forty-three thousand and fifty-three dollars and eighty-two cents. Every citizen should feel himself a business partner in the employment of this fund, and directly interested in the results. The danger of carelessness and indifference in its management is greater than all other dangers. Any good business manager would ask, what are the results or profits of this investment in civic ability, industrial power, and the decrease of pauperism and crime? Whether we look at it from an intellectual, social, or industrial standpoint, it is difficult to overrate the

MAGNITUDE OF THE INTEREST INVOLVED.

In order to furnish a basis of comparison between the condition and cost of education in California and the other States of the Union, I take the liberty to preface this report with some statistics from that of the National Bureau of Education. The last published report of that office, though two years old, will not vary greatly from one brought down to the present year, except in the proportionate increase of the population and expenditures. The grand total of annual expenditure in the United States for public schools in eighteen hundred and seventy-five was eighty-one million nine hundred and thirty-two thousand nine hundred and fifty-four dollars; the total valuation of school property, one hundred and seventy-three million eight hundred and eighty-three thousand five hundred and forty-five dollars. New York, with a school population of one million five hundred and eighty-three thousand and sixty-four, furnishes one hundred and seventy-six days of instruction, at an annual cost of eleven million six hundred and one thousand two hundred and fifty-six dollars. Pennsylvania, with one million two hundred thousand, one hundred and fifty-one days, at a cost of eight million seven hundred and ninety-eight thousand eight hundred and sixteen dollars. Ohio, one million seventeen thousand seven hundred and twenty-six school population, gives one hundred and forty days, at a cost of eight million seven hundred and eleven thousand four hundred and eleven dollars. Illinois expends seven million eight hundred and sixty thousand five hundred and fifty-three dollars upon a school population of nine hundred and fifty-eight thousand and three. Massachusetts gives one hundred and seventy-seven days of schooling to two hundred and ninety-four thousand seven hundred and eight census children, between the school ages of five and fifteen, at a cost of six million four hundred and ten thousand five hundred and fourteen dollars. Indiana, with six hundred and sixty-seven thousand census children, expends five million forty-one thousand five hundred and seventeen dollars, and gives one hundred and twenty days schooling. Iowa, with a school population of five hundred and fifty-three thousand nine hundred and three, gives one hundred and thirty-six days schooling, costing five million thirty-five thousand four hundred and ninety-eight dollars, to pupils between the ages of five and twenty-one.

Eight States, viz., Arkansas, Florida, Illinois, Indiana, Louisiana, North Carolina, Ohio, Pennsylvania, and West Virginia, fix the school age between six and twenty-one, or furnish fifteen years tuition

to each public school pupil. Ten States, and among these New York, Missouri, and Iowa, furnish sixteen years tuition to each public school pupil, between the ages of five and twenty-one. The limit is longest in New Hampshire and Maine, four to twenty-one; shortest in Massachusetts and Rhode Island, five to fifteen; California's limit is from five to seventeen; that of Connecticut from four to sixteen years—for both twelve years tuition.

In comparing the average duration of schools in days, California ranks as the seventh State, having one hundred and forty-nine days; New Jersey, the highest reported, has one hundred and ninety-four. In proportion per capita to school population Massachusetts expends twenty-two dollars, the highest sum, and Georgia the lowest, one dollar and ten cents. In proportion to pupils enrolled, Arizona actually expends the most, forty-two dollars and forty-one cents; Massachusetts, twenty dollars; California, in eighteen hundred and seventy-six, twenty-one dollars and sixty-two cents; in eighteen hundred and seventy-seven, twenty-two dollars and four cents.

Again, in proportion per capita to daily average attendance (leaving out Arizona, fifty-seven dollars and sixty-six cents), the annual expenditure of California, twenty-five dollars and eighty-two cents in eighteen hundred and seventy-five, and twenty-four dollars in eighteen hundred and seventy-seven, ranks fourth; Colorado expending twenty-nine dollars and seventy-three cents; the District of Columbia, twenty-seven dollars and sixteen cents, and Massachusetts thirty dollars.

In no other State are teachers so well paid as in California, and so justly, according to service rather than sex. Massachusetts pays her male teachers an average salary per month of eighty-eight dollars and thirty-seven cents; her female teachers thirty-five dollars and thirty-five cents. California pays her male teachers eighty-four dollars and ninety-three cents; her female teachers sixty-eight dollars and one cent. And in no State, it is believed, in proportion to its age, resources, and population, have the educational provisions been more liberal, more wisely administered, or more equal and lasting in their benefits.

In the United States, for a school population numbering in eighteen hundred and seventy-five over fourteen millions, ten and a half millions of whom were between six and sixteen years of age, and four and a quarter millions actually attending a public school, we had two hundred and forty-nine thousand two hundred and sixty-two teachers. General Eaton says: "Large as this number is, it is one hundred thousand less than is required to teach the entire school population, allowing an average of forty scholars to each teacher." Surely those who plead for the education of the many will not be accused of partial pleading in view of these facts, and the equally pertinent fact that by far the greater portion of the teaching furnished is unprofessional in its character. Mr. Phipps, General Agent of the Massachusetts Board of Education, expresses the opinion that the ratio of improvement in the qualification of teachers for their work is not equal to that in buildings, appliances, courses of study, etc., and that in consequence the benefits of the enlarged outlay are of little avail to what they otherwise might be. "Comparatively few of our eight thousand teachers," he says, "have had the benefit of thorough, systematic, special training for their work. Most commence

with no well defined plan of the work to be accomplished, are placed in charge of fifty or sixty children of different ages, habits and attainments, and the wonder is that many accomplish as much as they do, when entire failure might reasonably have been expected." The increase of

NORMAL SCHOOLS

In the United States is one of the most hopeful signs of progress. Indeed, the condition of these schools, and the thoroughness of the training in Teachers' Institutes may now be taken as a gauge of the educational standing of a State. When Horace Mann, Hon. John A. Dix, and other patriots, first urged the *economy* of establishing such institutions, the argument was but lightly appreciated. The State of New York now cheerfully expends one hundred and fifty thousand dollars per annum upon eight Normal Schools, in order that twelve million dollars may not be wasted in the hands of incompetent agents. These schools have been "*towers of strength in the educational systems of older States,*" and the success of the

CALIFORNIA STATE NORMAL SCHOOL

Justifies us in believing that no other expenditure on the part of this State has proved so generally satisfactory in its results.

The best developed Normal Schools contain two distinct grades of pupils, viz.: those who are engaged in acquiring sufficient knowledge of the branches to be taught in the public schools, and those who, having this knowledge, are being trained in the methods and practice of teaching, and the management of schools. With greater uniformity and thoroughness of preparation, the importance of the academical work will naturally diminish, and more of time and means be devoted to that which is purely professional. In our own Normal School, training classes are maintained and the elementary drill is carried forward under skillful teachers, and the most approved pedagogical methods. The introduction of a model "Kindergarten," which could be made self-supporting, and the addition of a teacher competent to instruct in the methods of Froebel, and to point out their application to the wants and work of the primary schools, would make our State Normal School second to none in the United States.

It is also greatly to be desired that the appropriation for the two next fiscal years should be sufficient to cover the necessary improvement of the ample grounds belonging to the Normal School, thus affording needed facilities for the study of botany and horticulture.

The California State Normal School, established in eighteen hundred and sixty-two, has five hundred and twelve graduates, and nearly that number are at present in attendance. It gives me pleasure to state that some of our city schools are becoming worthy of the position of Normal Schools, by their adoption of similar standards. This is notably true of the Girls' High School in San Francisco. Our larger cities already furnish materials for schools of practice, which, when properly organized and operated in connection with normal classes in the High Schools, will form one consistent organism, of which the State Normal School will be the natural head. Developed on this line, normal instruction will not require the establishment of new centers for years to come, especially if due advantage

be taken of the facilities afforded under our present law for the maintenance of

TEACHERS' INSTITUTES

In the several counties. These important agencies for directing, stimulating, and unifying the educational work of the State have been greatly improved, not only here but elsewhere, during the past two years.

The fact that so large a proportion of our teachers have been educated in the Grammar and High Schools, and are without experience when they enter the profession, points to the necessity of bringing these beginners under the influence of competent instructors. For many it is the only available way of becoming acquainted with the best methods of teaching, and for all it is the best way to supplement defects, and awaken the desire for improvement. The experience of each becomes through the Institute the common property of all. Again, the interest aroused, and the information disseminated among parents and patrons of schools, the coöperation thus gained among our most solid and influential citizens, who will aid in shaping educational legislation, is not of secondary importance. Reports of Institute proceedings carried by the press into the heart of every reading family diffuses these benefits still more widely.

It has been my aim to increase the efficiency of the Teachers' Institutes by every means in my power, and in carrying out this object I cannot overstate my obligations to the County Superintendents, who have most ably and zealously assisted, or to the Principal and Professors of the State Normal School.

Over seventy Institutes have been held during the past two years, sixty of which have been attended by myself or deputy. Nearly all have enjoyed the instructions of Professor Allen or Professor Norton. Abundant proofs of the beneficial effects of the Institutes upon the schools are found in the official reports of County Superintendents.

Superintendent R. H. Bramlet, of Fresno County, says: "Many of our most intelligent citizens refer to the Institutes in a manner that proves their lasting impressions for good, discussing what may be made practical in the suggestions given. I have visited all the schools in my county since the Institute was held, and not one teacher did I find that had not something in practice which had been gained there."

Superintendent McDermott, of Butte County, writes: "Soon after the adjournment, in making my round of visits to the schools of the county, I have been pleased to see the fruits of these instructions. I am convinced that Institutes conducted by trained and skillful educators are worth all their direct and indirect cost."

Before leaving this subject, it is proper to say that the reports of nearly all the State Superintendents for the years eighteen hundred and seventy-six and eighteen hundred and seventy-seven contain recommendations for an extension of time devoted to Institutes, and an increase of means at their disposal. The average time given in the State of New York is two weeks.

VACATION SCHOOLS VS. STREET EDUCATION.

The establishment of schools for the benefit of children who must remain in the city during the long vacation, and for whom some

wholesome and improving occupation ought to be provided, must commend itself to every thoughtful mind. I think such schools should differ essentially both in the subjects pursued, and the methods employed, from the ordinary term schools. They should be arranged on the half-time principle, in order to benefit the largest number, and should be industrial or practical in their character. For instance, a Girls' School of Sewing could be so arranged as to cover elementary exercises in needle-work, cutting and designing of patterns, and the use of the sewing machine for more advanced scholars.

These instructions could be accompanied with illustrated lessons and lectures on *materials*, etc.

Classes for boys could be similarly formed and exercised according to the methods described by Professor Runkle, in Appendix B.

Vacation schools, of a somewhat different character from those suggested above, have been maintained at Providence, Rhode Island, with great success. The instruction in them is mostly oral, aiming to give useful information concerning matters of common life. The Providence Committees say of them: "One thousand one hundred and fifty-two children have been entered into these schools, with an average daily attendance of from nine hundred to one thousand; they have been kept from the perils of the street, and, while not overtaxed with study, have been so disciplined as materially to advance the interests of the regular schools."

FREE TEXT-BOOKS.

No subject has attracted greater attention from the educators of the country during the last two years, or has been more generally commended than that of supplying free text-books to the public schools. Having been successfully tried *forty* years in the city of New York, *thirty* in New Jersey, eight in the State of Illinois, from five to ten years in many eastern cities, where the cost of books has been reduced from three dollars to from seventy-five cents to one dollar for each child, it cannot be regarded as an experiment. From the mass of testimony adduced, I have no doubt that this plan would increase the attendance and efficiency of the schools, but *as there is no obstacle in this State preventing any district from adopting it*, the failure to do so is doubtless owing to a lack of information as to the results elsewhere. (See Appendix E.)

TAXATION.

An Act of Congress, approved March third, eighteen hundred and fifty-three, gave the State the sixteenth and thirty-sixth section in each township, or one-eighteenth of all the public lands in California, for the use of the schools. Some of these sections along the mineral belt were subsequently found to be among the most valuable lands of the State.

Had these lands been managed in the interests of the children of the State, rather than of speculators, there would be little or no need of a school tax at the present time.

In *Heydenfeldt vs. Dana Gold and Silver Mining Company*, Supreme Court of the United States (3d Olló, 634), the principle is laid down that where there are known mines on land, which, at the time of its survey, is found to be on sections sixteen or thirty-six, that

such land does not go to the State under the law granting sections sixteen and thirty-six for school purposes. This decision relates to land in the State of Nevada. The Secretary of the Interior, Hon. Carl Schurz, has applied the principle of this decision to California in a decision in the case of L. J. Paley and Henry Thomas vs. State of California, a copy of which is found in the Appendix.

In this he holds in accordance with said decision, and also extends said decision to its legitimate conclusion, that the sixteenth or thirty-sixth section having been surveyed as public land, and no known mines being upon it at that time, that it is the property of the State, notwithstanding mines may subsequently be found upon it.

The effect of this decision is to give to the School Fund all the sixteenth and thirty-sixth sections of public land in the State upon which no known mines are found at the time of the survey.

The report of the State Land Commissioners appointed by the last Legislature shows how the children have been defrauded of their birthright. I would strongly urge upon the Legislature the duty of making such provisions as will not only secure the School Fund and school lands yet unsold, but to take suitable steps for the recovery of what has been alienated. (See Appendix D.)

QUALITY OF THE EDUCATION GIVEN.

It appears to me to be the plain duty of the State Superintendent fearlessly to expose any apparent defects in the Public Schools, as well as to praise their more admirable features. While all change is not improvement, there can be no improvement without changes, preceded by criticism, discussion, and comparison of views by experienced men. It should also be remembered that our schools are excellent in consequence, and not in spite, of the voluntary and intelligent support of the citizens of the State, and that the opinions of any considerable body of these are entitled to respect.

As showing the general drift of public sentiment throughout the country, upon our Public Schools, the following extracts are given from recent State Reports, and other official sources. The State Superintendent of Minnesota says in his last report:

By reason of moral cowardice our Public Schools are drifting into inefficiency. The time has come for illustrating that it may be possible to go to the bottom of the defects in our school system, *without knocking the bottom out of the system itself; to incorporate new elements of great value into it, and yet retain all its present excellencies.*

Superintendent Newell, of Maryland, in the opening address before the National Teachers' Association, voiced the popular sentiment in saying:

Looking at the ordinary and average common school programme in the United States, it will be found that the interests of the few who complete it are studied more than of the many who do not complete it. But the true theory of a common school programme is that every step shall be the best possible preparation for *stepping out* rather than for *stepping up*. The school system, as it operates at present, does not go down low enough, does not stoop to take in the very classes which need it most. Well-clad boys and girls who can give six hours a day to the Public School, and an hour or two after school hours to the preparation of lessons, are welcomed with open arms. But what kind of reception is afforded to those who must go irregularly, or not at all? Those who work half the day at blacking boots or selling newspapers, but could be induced to go to school the other half? For those whose parents do not wish them to go to school, and those who refuse to go when they are sent? Finally, for the Ishmaelites of our street deserts, growing up in outlawry, whose hand is against every man's and every man's hand against them. There is growing up in all our cities, towns, villages, and even in some

country districts, a class of young people who must live either by honest labor or by crime, and they are not taught to labor. What does the Public School do for them? The Public School not only does not go down low enough to affect the very classes who have most need of it, but it deals too much with technical scholarship, and too little with practical utility; too much in mere preparation for advancement in the hierarchy of studies, and too little in preparation for the verities of life. A knowledge of some form of industrial labor is as necessary as a knowledge of books, and the State which acknowledges its obligation to teach children to read, cannot logically deny its obligation to teach them to work.

Superintendent S. R. Thompson, of Nebraska, says:

Our school work is not as well adapted to the wants of our people as it ought to be in the following, among other particulars:

1. It is too bookish. The book is taught instead of the subject; words are taught instead of ideas: the relations of words are taught instead of the relations of thoughts or things.

2. Our courses contain too many things. The multitude of subjects studied precludes the formation of habits of continued work at a single thing.

3. The studies pursued are too often dictated by fashion instead of being adopted from a consideration of their fitness. For working people who do not take an extended education, book-keeping is a much more useful study than algebra, yet the latter is studied by ten times as many pupils as the former—because it is the fashion.

4. The metaphysical refinements of modern methods in many cases require children to follow, or attempt to follow, the course of their own mental operations in the attainment of intellectual arts where the pupil is unable to comprehend the philosophy of the process, and in the attempt to do so fails to acquire the art. This becomes sometimes ludicrously obvious in the attempt of children to master the subtleties of some of the "logical solutions" given in some works on mental arithmetic.

5. There is too much cultivation of the *knowing* powers to the exclusion of the active. A man's intellectual standing should not be measured by what he *knows*, but by what he can *do*. Knowledge is not power, but only a condition for the attainment of power.

Superintendent Wickersham, of Pennsylvania, says: "More attention should be given to the education of people for work." He thinks "our system of education, judged by its fruits, is not sufficiently practical," that "our Public School leading should be not to the higher education, but towards mills, workshops, and farms," and suggests the agencies through which this may be accomplished, viz., universal instruction in industrial drawing, technical departments attached to the High Schools; that the technical departments of the Colleges be strengthened; that the State Normal Schools be required to give more attention to technical and industrial subjects, in order that qualified teachers may be obtained; that municipal school authorities should supplement their present systems of Public Schools by one or more Industrial Schools, or schools for artisans, where suitable instruction could be given for future workingmen.

Superintendent Searing, in the last report from the State of Wisconsin, says:

The present system of public instruction here, as in other States, is, as a business system, far from being the best that can be devised for the important ends sought. It does not secure results in proportion to the money expended, to say nothing of those demanded by our political institutions and our increasingly complex social and industrial life; does not keep pace with the material development of the country. The average country school of to-day does not so well qualify the average pupil for the struggle for life as he now finds it, as did the same school a generation ago qualify this pupil's father for the simpler and less exacting demands of that period.

Superintendent Smart, of Indiana, says:

Intelligent economy does not require that our system cost less, but that it produce more. Educational business should be conducted on the sound business principles which make the success of other callings; neither school officers nor teachers should feel justified in providing an inferior course of study, partial in its benefits, instead of one which will be of the greatest value to the largest number of pupils.

The testimony of these skilled witnesses, which could be multiplied indefinitely, scarcely requires an additional word. That the ques-

tion of educational reform is not local or sectional is sufficiently shown by the foregoing extracts. That it is not even a national question is shown in the admirable paper of Dr. Schwab, upon school gardens and school workshops, appended to this report. (See Appendix D.)

Among the *means of reform* Superintendent Thomson suggests the following:

1. Concentrate the pupil's work on fewer subjects, and thus develop the power of continuous work.
2. To distinguish between knowledge and skill; and remember that skill can only be obtained by practice.
3. To test the pupil's advancement in the knowledge of an art by calling upon him to practice the art, rather than to tell how it ought to be done. For years many teachers have been, ostensibly, teaching grammar as the art of correct writing; but instead of testing the learner's knowledge by asking him to write, he was asked to analyze or parse, as if that was any test of his ability to write correctly.
4. To separate the useful and necessary parts of arithmetic from those which are only curious or disciplinary (?) and to teach the more important first, leaving the rest to the High School or College.
5. Composition must take the place now occupied by grammar, and the latter be carried forward to its true place in the curriculum of the College or High School.
6. Penmanship should have regard principally to plainness, and rapid execution. Fancy flourishing may be considered an "extra."
7. The pupil must be made to feel that he has *mastered some one thing*. When a pupil feels that he has too many studies he is in a bad way.
8. The most perfect clearness and definiteness must be regarded as indispensable in all stages.
9. Drawing as a means of cultivating the perception, and remembrance of forms and their relations, and of developing the power of exact and comprehensive observation must be taught from the beginning of the school course. The pupil must be made as familiar with the *form* language as with the *word* language.
10. Reading must be taught as a means of obtaining knowledge rather than of communicating it. Especial pains should be taken to cultivate the ability to read easily and understandingly; and if possible every pupil should be taught to love reading.

These changes and reforms, if carried out judiciously, would save a large part of the years now devoted to the study of the common branches, and leave time to teach the elements of the natural sciences and other things which every intelligent working man needs to know.

Such a change in our methods of instruction would greatly improve them for the use of those who will ultimately engage in industrial pursuits, and not in the least interfere with the best progress of those who aspire to higher scientific or professional education.

Part of the time gained by thus abridging and limiting the present curriculum of school studies, should be given to instructions in morals.

The possibility of teaching morality in a systematic way, and as part of the regular course, is denied by a majority of those who uphold as well as of those who oppose a purely secular system of education. Many deny even the need of it, holding that the family and the church are competent to take charge of this department. But it must not be forgotten that the Public School contains pupils who have no church connexion and no family instruction. The safety of the State requires that *all* her citizens should know the difference between right and wrong. Surely, it is of quite as much importance to *do* right as it is to spell right, yet how insignificant is the time given to the one in comparison with what we spend on the other; besides, every school does in effect teach morality, and the only question is: shall it be taught indirectly, spasmodically, and according to the whim of the individual, or shall it be taught systematically, continuously, and with the weight of superior authority? Would not mental development be as effectually secured by the discussion of problems of right and wrong in conduct as by correcting bad English, making out lists of long rivers, or extracting square and cube roots?

Besides morals, the elements of political economy would claim a part of the time which we are attempting to redistribute. The usefulness of this branch of knowledge no one questions, and, in the curriculum of our best high schools political economy is assigned to a place alongside of moral philosophy. But this does not meet the case, because millions of the pupils never reach the High Schools. My opinion is that the elements of personal and social morality, the principles of good behavior in the family and in the world, the elements of political economy, the nature and the relations of money, capital, labor, and wages can be made as accessible to the young as the elements of grammar and arithmetic, and much more interesting. There are heights in all subjects (grammar as well as political economy), which the young cannot climb. There are depths which they cannot penetrate, but there are also wide plains where they can

freely roam and gather the flowers of useful knowledge. I would have these fields opened up to the younger as well as the older pupils; it is not necessary for them to attempt to scale the mountains till their limbs are stronger.—*Hon. M. A. Newell, State Superintendent of Maryland.*

I have been urging for more than thirty years that the first lessons in morals, in industry and economy, should be the same for girls and boys, in the home as far as possible, and in the school, because it is possible to create a uniformity in the school which we are not yet able to do in the home. I know some of the difficulties of the initial steps to this change. Opposition will come from several sources.

1. From that class of parents, more numerous than we could wish, who do not expect *their* sons and daughters to work for a living, and are unwilling to subject them to wholesome discipline. This parental false estimate of the true relations of industry to morality, and to individual welfare, brings its own correction, in useless daughters and spendthrift sons.

2. From the large number of teachers who depend upon text-books, and whose training has given them a bias in a contrary direction. This will be overcome by improvements in Normal School instruction, and by the extension of Kindergarten methods into higher grades.

3. We shall find opposition to any plan which tends to reduce the consumption of text-books at present required, and which must be changed whenever the improvement of the schools demand it. This, too, will be overcome by more enlightened public opinion, and the law of supply and demand.

COMMON SENSE IN THE PUBLIC SCHOOLS.

Twenty years ago, William Crandle, in his excellent work, "Three Hours a Day," wrote: "It is to make men, not to fill them, that we want schools. Our public schools, therefore, should embrace the science of man, the science of agriculture, the science of mechanics, the science of housewifery, and the moment we enter the domain of nature our range is unlimited." (See Report of San Francisco Schools for 1876, pp. 473-478.)

If the school and the home ever form an educational unit, or if a true reciprocity is ever established between them, it must be after a generation of rightly educated parents have taken the places of those now on the stage. While the importance of a better home education of parental duty cannot be overstated, the argument for restricting education in industry and morality to the home has the same foundation in experience as that for intellectual education, and no other. It cannot be doubted that industrial incapacity is a prolific source of moral degeneration. These two hundred thousand and sixty-seven school children of California cannot all be stock brokers or Presidents of savings banks; cannot all be "ornaments of society," and liberal patrons of art. They are to make our laws, to occupy the shops, factories, and farms; to be home builders or home destroyers; to fill or to empty the jails, prisons, and lunatic asylums; to recruit the ranks of industry, or of street Ishmaelites. Which shall it be? Do our schools aim to confer either the ability or the disposition to earn an honest living, to look upon labor as honorable, to detest vice and crime? I hold it to be a correct principle that while the common school does not aim to make farmers or mechanics, but leaves this to special schools, that it is the business of the common schools (which

educate the masses of the industrial population) to teach the elements of technical knowledge, both scientific and artistic.

These ends must be reached by gradual and well considered changes in the courses of study, better text-books, and better instruction from the living teacher, rather than by revolution. Yet, I hold it to be quite as much the duty of the State and municipal governments to provide special schools of an industrial character as to support High Schools. Unless we can put a solid respect for useful labor into our schools, bringing intelligence and moral power into direct relation to the necessary occupations of our people, we can hardly escape the conclusion that our influence is thrown upon the opposite side of the scale. We may teach by negation that labor is menial; that it is creditable to live upon the earnings of others; that certain kinds of theft and robbery are in the line of social and political preferment. It was in recognition of these obligations that the National Government has endowed in each of our States institutions "for the benefit of agriculture and the mechanic arts," and that States have doubled these endowments by direct appropriations.

In many States this fund has been sacredly devoted to those uses with marked benefit to the leading industries, the Colleges founded upon it giving not only intellectual training in the languages and literature, but also in the sciences practically applied to farming, the more important mechanical arts, also photography, telegraphy, printing, and the arts of the household. In the City of Boston gentlemen of culture of all creeds and politics have united in asking the authorities for the establishment of Public Schools of Trade.

Senator Hill, of Georgia, declares that industrial education is the hope of the South. In the range of primary schools we find the Kindergarten and its literature everywhere spreading. The City of St. Louis has twenty-eight Kindergartens connected with its primary schools.

If we turn to Europe we find not only hundreds of schools of industry for the young, but others for the instruction of adult farmers and artisans. In Denmark there are forty-nine "Farmers' High Schools," supported in part by the government, for the benefit of students between eighteen and thirty-five years of age. Over two thousand men and one thousand women are in these schools. It is needless to multiply examples.

The great majority of the children of California are to become industrialists of some sort. It is said there is no demand on our coast for educated labor—that the mechanical callings are already overfull, and that, *therefore*, the hands of our children must remain unskilled, and find the ready mischief which ever waits the idle hand. Yet one may ride day after day over lands waiting for tillage, while our cities are spending more every month to defend their property than it would cost to demonstrate in rural farm and industrial city schools how the evils of hoodlumism may be averted.

I believe it is entirely practicable not only to educate our children *for* the industries in the Public Schools, but *in* the industries in special schools, and in rightly conducted Agricultural and Mechanical Colleges, for which ample means have been provided.

It seems unreasonable to our taxpayers to keep on paying (aside from the cost of text-books, and including interest on school property), three million three hundred and forty-three thousand five hundred and fifty-three dollars and eighty-two cents for schools,

while jails, asylums, almshouses and prisons are crowded with the vicious, the incapable, the criminal classes, without asking: Does public education pay in industrial power, in civic ability, in public and private virtue? If it does *not* pay, is it not time to insist that it take a new direction, that it give more training and less cramming; that it impart more knowledge of things necessary to be known, and less of things a knowledge of which may be deferred, or is useless to the mass of pupils.

The school is not the monopoly of the few, in their interest exclusively—it is the medium of direct well being to all the people. Hence its curriculum of studies should have regard unto the needs of the whole people.

A school is a business institution, created for specific purposes. It should be conducted in all of its management upon the principles of business. Its business is to assist; as being one of the many corporations created and fostered by the State, in increasing the wealth by increasing the productive power of the State. These ends are served when the attending learners are acquiring sound knowledge in the sciences and the arts; when they are learning to respect authority; when they are cherishing a proper self-respect; when they are understanding their relations to their peers; when they are establishing the imperative habits demanded by business; when they are founding all their dealings on the general principles of law, morals, and religion.

The ends, with schools, being good citizens, these general principles should be practically adopted into the daily management of the school, not that any special belief or faith of any particular sect should be taught or tolerated. This is the work of another institution, protected and fostered by the State.—*Prof. J. H. Hoose, before the National Teachers' Association.*

HIGH SCHOOLS.

The right of the State and municipal governments to maintain High Schools is not legally distinguishable from the right to maintain elementary schools. There is a lack of clear and distinct comprehension in the public mind of the following principles:

1. *Schools exist because of a "well founded claim"* (see definition of "Right," Law Dictionary), *and not because of toleration.* The universal recognition of this principle is found in the Constitution of every State in the Union, in clauses "to encourage schools and the means of instruction" (Arkansas), or declaring it "the paramount duty of the State to make ample provision for the education of all children residing within its borders, without distinction or preference" (Florida, 1868), or that "the stability and perpetuity of free republican institutions depend upon the intelligence and virtue of the people" (Kansas), or, carried still further, declaring "it shall be the duty of Legislatures and magistrates, in all future periods of this Commonwealth, to cherish the interests of literature and the sciences, and all Seminaries of learning, especially the University at Cambridge, Public Schools and Grammar Schools in the towns" (Massachusetts). Further citations are not required to show that "the school is created and encouraged as an institution that is purely one of political economy, for increasing the production and accumulation of wealth, and as a means of preventing pauperism and crime, which is still only wealth." The right to educate is "one of those inalienable rights which have never been surrendered by the people, either to Congress or to Legislatures, because of the right of the people to the fruits of intelligence, and protection from the folly and crime which results from ignorance." As Horace Mann said, "The right to *hang* goes with the right to educate. We educate men, that those who are not 'born to be hung' may not be hung for having been born."

2. A school is a civil corporation, created by sovereign authority, viz., the citizens and voters of the State, for a specific purpose, viz., facilitating the economic interests of the State by the diffusion of

knowledge, skill, mental and moral power, etc.; and continued by a succession of members.

The rights and duties of this corporation, defined by special laws, under the original and general contract, are two-fold, viz.: One series facing toward the State, and another toward the people. The usefulness of the schools depends on the just recognition by the *agents* of this corporation of these rights and duties. So little are these understood, that propositions are continually put before the public with regard to the schools, at variance with the first principles of law and justice.

3. Education is not a fixed quantity, to be measured by one generation for that which succeeds it. The "common schooling" of the past century, for instance, would not adequately fit the average citizen of to-day for the necessary business of life. The standard of general intelligence is higher. The demand for secondary and High Schools is far more general throughout the United States at the present time, than was the demand for elementary schools fifty, or even twenty-five years ago. "The school being the creation of the State, and the interests involved being so vital, it would seem to be a legitimate and necessary consequence that all schools should be regarded as to their advancement by the States." If this be true, Graded and High Schools are legitimate, because necessary.

It would be easy to show that something more than elementary education is necessary to the welfare, and even the life of the State, and also to show that this should not be left to private greed or sectarian ambition. The *free High School is a barrier against the establishment of class distinctions in American society*, which, if allowed to grow, are fatal to the interests of a republican government.

As against the propositions that the State should withdraw entirely from the business of instruction, or that it give only elementary instruction—"as it furnishes food and fuel to those who are too poor to provide it for themselves"—I advance the proposition that it should offer to all its youth as thorough and as extended an education as its pecuniary ability will allow, having due regard to the density of population in given localities, the relations of studies pursued to the employments of the people, etc.

Many object to High Schools on account of their alleged extravagance. They certainly are extravagant if we are not able to pay for them, or if they are not worth what they cost. The total annual cost of all the High Schools, Seminaries, and Colleges in the land is trifling compared with the cost of our popular vices. High Schools managed upon the principles already laid down with regard to other schools, will certainly pay by increasing the producing power of a community. They will pay indirectly by keeping at home youth who would otherwise be sent away—by retaining in the schools those pupils who will give them the highest character, and who exercise the most healthful influence.

The school law of Switzerland requires every secondary district to establish at least one school under the name of Civil School, where the instruction is free for both sexes between fifteen and twenty years of age. The instruction is given in history, natural history, physics, political economy, and all matters of general interest. It is not necessary that all our high schools should be cut after one uniform pattern. They should vary somewhat according to the circumstances of the communities in which they are placed.

4. How much should be taught in the Public Schools? This question has been admirably answered by Henry Sawyer, Principal of the Middletown (Connecticut) schools.

I answer not by saying algebra or chemistry, or Greek or German, but so much as the wealth of the community and the density of population will allow, and I base this answer on a few simple principles:

1. Some in every community are able to give their children advanced education, and, in one way or another, will do so.

2. The expense of public schools, be it much or little, is mostly paid, in the form of taxes, by the wealthier portion of the community.

3. To limit the instruction given in these schools to the rudiments of education, would practically exclude from all share in their benefits the rich, whose taxes contribute so largely to their support, and the vastly more numerous class in moderate circumstances who aspire to secure the best obtainable education for their children. For none but the very poor or the very careless would be satisfied with schools thus limited in their scope; and those who were not satisfied with them would be compelled, after paying their taxes for the public schools, either to support private schools, or to send their children away from home to be educated.

4. Whence it follows that, while the schools of the State should be free even to the poorest, they should be good enough to answer the reasonable demands of the middle and wealthy classes.

STATE VERSUS SECTARIAN EDUCATION.

The proposition rife in so many quarters, that the State shall yield its function as educator to the churches, may be dismissed with a single paragraph:

We can find plenty of examples in those countries where the Church has held unlimited sway—has enjoyed every advantage in making education universal—by which to take warning. Neither Catholic Spain or Protestant England furnish evidence that the popular morality, to say nothing of intelligence, would be greatly advanced by abnegating the position taken by all the more advanced modern nations, as to the relation of governments to public education.

The words of Thomas Carlyle have a deep significance in this connection.

It is not because of his toils that I lament the poor; we must all toil, or steal (howsoever we name our stealing), which is worse; no faithful workman finds his task a pastime. The poor is hungry and athirst, but for him, also, there is food and drink; he is heavy laden and weary, but for him, also, the heavens send sleep, and of the deepest; in his smoky crib a clear, dewy heaven of rest envelops him, and fitful glitterings of cloud-skirted dreams. But what I do mourn over is this: that the lamp of his soul should go out: that no ray of heavenly or even earthly knowledge should visit him; but only in a haggard darkness, like two specters, fear and indignation bear him company. Alas! while the body stands so brawny, must the soul be blinded, dwarfed, stupefied, almost annihilated. Alas! was this, too, a breath of God; bestowed in heaven, but on earth never to be unfolded. That there should one man die ignorant who had capacity for knowledge, this I call a tragedy, were it to happen more than twenty times a minute, as by some computation it does. The miserable fraction of science which our united mankind, in a wide universe of nescience, has acquired, why is not this, with all diligence, imparted to all?"

The pregnant significance of this not overwrought appeal contains food for reflection to all philanthropic minds. An advance has been made towards universal education, from which there can be no retreat; there will be none. The great question of the age is, how to complete the great work undertaken?

AMENDMENTS TO THE SCHOOL LAW.

While I believe our school Code as a whole is not equalled by that of any other State, I am of the opinion that the following amendments would increase its efficiency:

1. Amend section one thousand five hundred and twenty-one by striking out subdivision fifth.

2. Amend Article III by inserting two or more counties having less than — number of districts into one district of supervision, the Superintendent to be elected by the counties jointly. Also, that each Superintendent shall receive a salary not less than one thousand two hundred dollars per annum, and actual traveling expenses, and shall devote all his time to the duties of his office. It is believed that by this arrangement the efficiency of the schools will be largely increased.

3. Amend section one thousand five hundred and ninety-three by changing the time for the election of School District Trustees from June to April.

4. Amend Article VIII by substituting County Assessors for Census Marshal. It is believed that this will increase the efficiency of this branch of the Public School service, while it will diminish the number of Census Marshals from one thousand eight hundred and twenty-eight to fifty-two.

5. Amend sections one thousand six hundred and seventeen and one thousand six hundred and ninety-six to require Trustees and teachers of union school districts to report to each Superintendent in the several counties of which such districts may be composed.

6. Amend sections one thousand six hundred and twenty and one thousand six hundred and twenty-one so that not more than — per cent. of the County School Fund shall be used for incidental expenses for the support of the school during any one school year.

7. Amend section one thousand six hundred and sixty-five by inserting "common things," and section one thousand seven hundred and forty-eight by striking out the word "algebra."

8. Amend section seven hundred and one by striking out the proviso, and section one thousand eight hundred and sixty by making its provision apply to every school district in the State.

9. Amend section one thousand seven hundred and twelve to allow School Boards to use, in their discretion, the Library Fund for the payment of teachers.

10. Amend section one thousand seven hundred and forty-four by striking out subdivisions fourth and fifth, and sections one thousand seven hundred and fifty, and one thousand seven hundred and fifty-one, and one thousand seven hundred and fifty-five by making them conform to the same.

11. Amend section one thousand seven hundred and fifty to include City Normal Schools, whose requirements are not less than the California State Normal School.

12. Amend sections one thousand seven hundred and seventy and one thousand seven hundred and ninety to require semi-annual in place of quarterly examinations. It is believed that this would meet all the demand for teachers and be no inconsiderable saving of expense.

13. Amend sections one thousand seven hundred and seventy-two and one thousand seven hundred and seventy-five to make them read the same as prior to the amendments of the last session. As the sections now stand, they operate unjustly to the holders of first grade county certificates by preventing their renewal and tend to make inferior second and third grade schools.

14. Amend section one thousand eight hundred and fifty-eight, subdivision first, by making it read eighty-five census children or fraction thereof of not less than fifteen. Also, amend subdivision fourth by making the *pro rata* apportionment to all districts in proportion to the average daily attendance.

15. The present method of apportionment, by giving the same amount to a district, whether the average school attendance is ten or ninety per cent. of the census population, is a premium on non-attendance.

STATISTICAL SUMMARIES.

The actual and comparative condition and progress of the Public Schools of California, for the two years commencing July 1st, eighteen hundred and seventy-five, and ending June thirtieth, eighteen hundred and seventy-seven, may be summarized as follows:

1. CENSUS STATISTICS.

(a.) ENUMERATION OF CHILDREN.	1876.	1877.
Number of white boys between the ages of 5 and 17	92,430	98,978
Number of white girls between the ages of 5 and 17	90,100	97,816
Number of white children between the ages of 5 and 17	182,530	196,794
Number of white children between the ages of 5 and 15 in 1875		169,383
Increase		27,411
Number of negro boys between the ages of 5 and 17	595	631
Number of negro girls between the ages of 5 and 17	547	568
Number of negro children between the ages of 5 and 17	1,142	1,199
Number of negro children between the ages of 5 and 15 in 1875		1,067
Increase		132
Number of Indian boys between the ages of 5 and 17	606	561
Number of Indian girls between the ages of 5 and 17	509	486
Number of Indian children between the ages of 5 and 17	1,115	1,047
Number of Indian children between the ages of 5 and 15 in 1875		1,113
Decrease		66
Total number of census children between the ages of 5 and 17	184,787	200,067
Total number of census children between the ages of 5 and 15 in 1875		171,563
Increase		28,504
Number of white children under 5 years of age	82,924	88,286
Number of negro children under 5 years of age	381	424
Number of Indian children under 5 years of age	290	241
Total number of children under 5 years of age	83,595	88,951
Total number of children under 5 years of age in 1875		78,650
Increase		10,301
Total number of children under 17 years of age	268,382	289,018
Increase		20,636

The percentage of increase of *census* children from eighteen hundred and sixty-six, to eighteen hundred and seventy-seven, is as follows:

From 1866 to 1867	10.80 per cent.
From 1867 to 1868	8.30 per cent.
From 1868 to 1869	8.28 per cent.
From 1869 to 1870	10.04 per cent.
From 1870 to 1871	6.84 per cent.
From 1871 to 1872	5.56 per cent.
From 1872 to 1873	3.10 per cent.
From 1873 to 1874	{ No comparison possible.
From 1874 to 1875	
From 1875 to 1876	7.42 per cent.
From 1876 to 1877	8.27 per cent.

(1.) AT PUBLIC SCHOOLS.

(b.) SCHOOL ATTENDANCE OF CENSUS CHILDREN.	1876.	1877.
Number of white children who have attended Public Schools at any time during the school year	125,193	134,306
Number of negro children who have attended Public Schools at any time during the school year	744	735
Number of Indian children who have attended Public Schools at any time during the school year	283	294
Total number of census children who have attended Public Schools at any time during the year	126,220	135,335
Average number of census children belonging to Public Schools	91,784	97,527
Average daily attendance of census children	83,391	89,539
Percentage of total number enrolled	68.30	67.64
Percentage of total number enrolled in 1875		68.14
Decrease .....		.50
Percentage of average number belonging	49.66	48.74
Percentage of average number belonging in 1875		45.08
Increase		3.66
Percentage of daily attendance	45.13	44.75
Percentage of daily attendance in 1875		40.60
Increase		4.15

In other words, from July first, eighteen hundred and seventy-six, to June thirtieth, eighteen hundred and seventy-seven, one hundred and thirty-five thousand three hundred and thirty-five were enrolled in the Public Schools, while the average number belonging, the actual pupils of the school, were ninety-seven thousand five hundred and twenty-seven, and only eighty-nine thousand five hundred and thirty-nine were in daily attendance during the whole time school was maintained.

The following table exhibits the percentages of daily attendance, average number belonging, and enrollment from eighteen hundred and sixty-six to eighteen hundred and seventy-seven:

YEAR.	Listed on Census	Enrolled in Public Schools	Percentage Enrolled	Average Number belonging to Public Schools	Percentage	Average Daily Attendance	Percentage
1866	85,152	37,906	44.51	28,232	33.15		
1867	94,349	54,726	58.00	41,411	43.89		
1868	102,183	60,946	59.64	45,667	44.69		
1869	110,642	67,834	61.31	52,168	47.15		
1870	121,751	70,030	57.44	50,155	41.19		
1871	130,116	83,628	64.27	65,949	50.68		
1872	137,351	92,255	67.55	71,481	52.04	64,375	46.86
1873	141,610	97,681	68.96	71,170	50.26	63,063	44.53
1874	159,717	105,890	66.29	70,279	44.00	63,651	39.85
1875	171,563	116,896	68.14	77,350	45.08	69,658	40.60
1876	184,787	126,220	68.30	91,784	49.66	83,391	45.13
1877	200,067	135,335	67.64	97,527	48.74	89,539	44.75

(2.) AT PRIVATE SCHOOLS.

	1876.	1877.
Number of white census children who have attended only private schools at any time during the school year	14,548	15,303
Number of negro census children who have attended only private schools at any time during the school year	39	10
Number of Indian census children who have attended only private schools at any time during the school year	38	31
Total number of census children who have attended only private schools at any time during the school year	14,625	15,344
Percentage of census children who have attended only private schools	7.90	7.67
Percentage of census children who have attended only private schools in 1875		8.75
Decrease		1.08

Percentage of number of census children attending private schools from eighteen hundred and sixty-six to eighteen hundred and seventy-seven.

YEAR.	Listed on Census	Enrolled in Private Schools	Percentage
1866	85,152	25,475	29.92
1867	94,349	18,182	19.38
1868	102,183	17,654	17.28
1869	110,642	17,344	15.68
1870	121,751	24,654	20.33
1871	130,116	17,029	13.50
1872	137,351	13,787	10.04
1873	141,610	12,507	8.84
1874	159,717	14,149	8.86
1875	171,563	15,021	8.75
1876	184,787	14,625	7.90
1877	200,067	15,344	7.67

(3.) AT NO SCHOOLS.

	1876.	1877.
Number of white census children who have attended no school during the school year.....	41,831	47,985
Number of negro census children who have attended no school during the school year.....	365	370
Number of Indian census children who have attended no school during the school year.....	827	680
Total number of census children who have attended no school during the school year.....	43,023	49,035
Percentage of census children who have attended no school during the school year.....	23.29	24.51
Percentage of census children who have attended no school during the school year in 1875.....		23.11
Increase.....		1.40

Since eighteen hundred and sixty-six, the non-attendance of census children has been as follows:

YEAR.	Listed on Census	Attended no School	Percentage
1866.....	85,152	21,771	25.57
1867.....	94,349	21,441	22.62
1868.....	102,183	23,583	23.08
1869.....	110,642	25,464	23.01
1870.....	121,751	27,067	22.23
1871.....	130,116	29,459	22.64
1872.....	137,351	30,780	22.41
1873.....	141,610	31,422	22.19
1874.....	159,717	39,678	24.84
1875.....	171,563	39,646	23.11
1876.....	184,787	43,023	23.29
1877.....	200,067	49,035	24.51

TO RECAPITULATE.

	1876.	1877.
Total number of census children who have attended Public Schools at any time during the school year.....	126,220	135,335
Total number of census children who have attended only private schools at any time during the school year.....	14,625	15,344
Total number of census children who have attended no school during the school year.....	43,023	49,035
Percentage of census children enrolled in Public Schools.....	68.65	67.77
Percentage of census children enrolled in private schools.....	7.95	7.69
Percentage of census children attending no schools.....	23.40	24.54

But, in order to obtain a correct estimate of the attendance at school of census children, we must take the average number belonging—that is, the number of children who can be considered as actual pupils of the Public Schools—instead of the total number enrolled, as in this number are included all those who attend for so short a time—sometimes only for a day, or, at longest, for a week—that they cannot be classed as pupils of the Public Schools. The real school attendance will then stand as in the following table:

	1876.	1877.
Number of census children attending Public Schools	91,748	97,527
Number of census children attending private schools	14,625	15,344
Number of census children attending no schools	43,023	49,035
Percentage of census children attending Public Schools	61.41	60.24
Percentage of census children attending private schools	9.79	9.48
Percentage of census children attending no school	28.80	30.28

(c.) NATIVITY OF CENSUS CHILDREN.

For eighteen hundred and seventy-six, the Census Marshals reported the nativity of two hundred and sixty-five thousand four hundred and twenty-two children not more than seventeen years of age. According to these reports, we had in this State in eighteen hundred and seventy-six:

Native born children, both parents native born	130,751
Native born children, one parent foreign born	28,449
Native born children, both parents foreign born	98,499
Foreign born children	7,723

Or, expressed in percentages, in eighteen hundred and seventy-six:

Per cent. of our children of native born parents	49.26
Per cent. of our children who had one foreign parent	10.72
Per cent. of our children who were of foreign parents	40.02

For eighteen hundred and seventy-seven, the Census Marshals reported the nativity of two hundred and eighty-seven thousand and seven children not more than seventeen years of age. Their nativity stands:

Native born, both parents native	135,506
Native born, one parent foreign born	34,405
Native born, both parents foreign born	108,699
Foreign born	8,397

Or, expressed in percentages, in eighteen hundred and seventy-seven:

Per cent. of our children of native born parents	47.20
Per cent. of our children who had one foreign parent	12.02
Per cent. of our children who were of foreign parents	40.78

II. SCHOOL STATISTICS.

(a.) NUMBER OF DISTRICTS AND SCHOOLS.	1876.	1877.
Total number of school districts	1,742	1,828
Total number of school districts in 1875		1,579
Increase		249
Number of First Grade Schools	964	914
Number of First Grade Schools in 1875		875
Increase		39
Number of Second Grade Schools	817	983
Number of Second Grade Schools in 1875		770
Increase		213
Number of Third Grade Schools	556	627
Number of Third Grade Schools in 1875		545
Increase		82
Total number of schools	2,336	2,485
Total number of schools in 1875		2,190
Increase		295

NOTE.—Under “First Grade Schools” are included High Schools, Grammar Schools, and First Grade Schools. Under “Second Grade Schools” are included Intermediate Schools and Second Grade Schools. Under “Third Grade Schools” are included Primary Schools and Third Grade Schools.

First Grade Schools are those in which first grade studies are taught, as laid down in the regular course adopted by the State Board of Education, *i. e.*, the pupils in this course must have completed all the studies of the lower grades.

Second Grade Schools are those in which no studies higher than those of the second grade are taught in the regular course.

Third Grade Schools are those in which only third grade studies are taught in the regular course.

Studies pursued by pupils out of the regular course (in the “discretion of Superintendents and teachers”) *i. e.*, the studies of the lower grades not having been completed, *do not affect the grade of the schools.*

(b.) SCHOOL ATTENDANCE.	1876.	1877.
Whole number of boys enrolled on Register	73,490	74,796
Whole number of girls enrolled on Register	66,978	67,862
Total number enrolled	140,468	142,658
Total number enrolled in 1875		130,930
Increase		11,728
Average number belonging	91,428	97,527
Average number belonging in 1875		86,637
Increase		10,890
Average daily attendance	83,391	89,539
Average daily attendance in 1875		78,027
Increase		11,512

SCHOOL STATISTICS—Continued.

(b.) SCHOOL ATTENDANCE.	1876.	1877.
Number enrolled in High Schools, or the advanced grade.....	2,240	3,433
Number enrolled in Grammar, or First Grade Schools.....	26,772	30,311
Number enrolled in Intermediate, or Second Grade Schools.....	26,588	28,960
Number enrolled in Primary, or Third Grade Schools.....	75,557	90,239
Percentage of pupils in High Schools.....	1.71	2.24
Percentage of pupils in Grammar, or First Grade Schools.....	20.41	20.83
Percentage of pupils in Intermediate, or Second Grade Schools.....	20.27	18.93
Percentage of pupils in Primary, or Third Grade Schools.....	57.61	59.00
(c.) Length of School Terms.		
Districts maintaining schools less than six months.....	67	31
Districts maintaining schools less than six months in 1875.....		34
Decrease.....		3
Districts maintaining schools six months or over, but less than eight months.....	846	621
Districts maintaining schools six months or over, but less than eight months in 1875.....		765
Decrease.....		144
Districts maintaining schools eight months or over.....	794	1,134
Districts maintaining schools eight months or over in 1875.....		787
Increase.....		347
Average number of months schools were maintained, for all the schools of the State.....	7.19	7.26
Average number of months schools were maintained, for all the schools of the State in 1875.....		7.47
Decrease.....		.21
Districts having not sufficient funds for an eight months school.....	1,108	1,112
(d.) Teachers.		
Number of male teachers.....	1,129	1,184
Number of male teachers in 1875.....		1,033
Increase.....		151
Number of female teachers.....	1,853	1,983
Number of female teachers in 1875.....		1,660
Increase.....		323
Total number of teachers.....	2,892	3,167
Total number of teachers in 1875.....		2,693
Increase.....		474
Number of teachers holding first grade State certificates, including life and educational diplomas.....	1,814	1,088
Number of teachers holding second grade State certificates.....	753	281
Number of teachers holding third grade State certificates.....	309	138

SCHOOL STATISTICS—Continued.

(d.) TEACHERS.	1876.	1877.
Average monthly salary paid to male teachers.....	\$85 00	\$83 78
Average monthly salary paid to male teachers in 1875		84 93
Decrease		\$1 15
Average monthly salary paid to female teachers	\$68 15	\$69 68
Average monthly salary paid to female teachers in 1875		68 01
Increase		\$1 67
Teachers who have taught in the same school more than one year ..	329	432
Number of teachers who attended County Institutes	1,298	1,819
Number of teachers who subscribed for some educational journal....	780	820
Number of teachers who are graduates of the California State Normal School	254	282
Number of teachers who are graduates of any State Normal School ..	722	328
(e.) County Superintendents.		
Number of school visits made by County Superintendents	3,201	3,373
Number of school visits made by County Superintendents in 1875 ..		3,621
Decrease		248
Number of Trustees appointed by County Superintendents	1,059	1,107
Number of Trustees appointed by County Superintendents in 1875 ..		1,186
Decrease		79
Number of city and county certificates granted to male teachers	434	401
Number of city and county certificates granted to female teachers ..	981	872
Number of applicants rejected	1,097	1,458
Number of certificates renewed	290	368
Amount of salaries paid County Superintendents	\$43,297 00	\$44,277 00
Amount of salaries paid County Superintendents in 1875		43,622 00
Increase		\$655 00
Average annual salary paid County Superintendents	\$833 02	\$851 48
Average annual salary paid County Superintendents in 1875		838 39
Increase		\$13 09
(f.) Miscellaneous School Statistics.		
Number of new school houses erected	99	112
Number of new school houses erected in 1875		175
Decrease		63

SCHOOL STATISTICS—Continued.

(f.) MISCELLANEOUS SCHOOL STATISTICS.	1876.	1877.
Districts having suitable accommodations for all pupils who may wish to attend school	1,410	1,414
Districts not having suitable accommodations for all pupils who may wish to attend school	382	326
Districts whose schools are provided with water closets	1,439	1,472
Districts whose schools are not provided with water closets	357	330
Districts having sufficient school grounds	1,529	1,636
Districts not having sufficient school grounds	156	176
Districts whose school grounds are suitably improved	656	653
Districts whose school grounds are not suitably improved	1,129	1,151
Districts whose schools are well ventilated	1,594	1,060
Districts whose schools are not well ventilated	99	118
Districts whose schools are supplied with good furniture	804	785
Districts whose schools are supplied with passable furniture	315	382
Districts whose schools are supplied with poor furniture	627	636
Districts whose schools are well supplied with apparatus	488	488
Districts whose schools are passably supplied with apparatus	524	560
Districts whose schools are poorly supplied with apparatus	744	744
Number of schools for colored children	18	14
Number of schools for colored children in 1875		19
Decrease		5
Number of pupils attending schools for colored children	377	325
Number of pupils attending schools for colored children in 1875		339
Decrease		14
Number of school visits made by Trustees	9,456	9,745
Number of school visits made by other persons	55,101	62,111

COUNTY TEACHERS' INSTITUTES.

	1876.	1877.	Increase.
Number held	29	37	8
Teachers in attendance	1,298	1,819	528
Cost	\$1,975 85	\$2,847 80	\$871 95

III. FINANCIAL STATISTICS.

(a.) RECEIPTS.	1876.	1877.
Balance on hand at the beginning of the school year.....	\$572,897 99	\$511,727 90
Received from State apportionments.....	1,330,862 95	1,475,101 41
Received from county apportionments.....	640,610 20	703,131 22
Received from city and district taxes.....	600,027 11	783,102 51
Received from miscellaneous sources (sale of bonds, rents, etc.).....	158,206 40	137,100 31
Total receipts from all sources.....	\$3,302,604 65	\$3,610,163 35
Percentage of School Funds from State apportionments.....	40.30	40.86
Percentage of School Funds from county apportionments.....	19.39	19.47
Percentage of School Funds from other sources.....	40.31	39.67
Increase since 1875 in receipts from State apportionments.....		\$264,292 92
In receipts from city and county taxes.....		467,419 85
In total receipts from all sources.....		219,804 05
Decrease since 1875 in receipts from county apportionments.....		\$412,398 84
In receipts from miscellaneous sources.....		223,476 67
Amount of State apportionments per census child.....	\$7 25	\$7 37
Amount of State apportionments per census child in 1875.....		7 06
Increase.....		\$0 21
Amount of county apportionments per census child.....	\$3 46	\$3 51
Amount of county apportionments per census child in 1875.....		6 44
Decrease.....		\$2 93
Total receipts of all kinds per census child.....	\$17 87	\$18 04
Total receipts of all kinds per census child in 1875.....		19 76
Decrease.....		\$1 72
(b.) Expenditures for school purposes.		
Amount paid for teachers' salaries.....	\$1,983,939 96	\$2,149,435 70
Amount paid for rent, repairs, fuel, and contingent expenses.....	374,222 49	378,754 50
Amount paid for school libraries.....	48,757 50	55,148 64
Amount paid for school apparatus.....	10,974 66	18,964 19
Total current expenses.....	\$2,417,894 61	\$2,602,303 03
Amount paid for sites, buildings, and school furniture.....	440,706 37	147,426 43
Total expenditures of all kinds.....	\$2,858,600 98	\$2,749,729 46
Percentage of current expenses paid for teachers' salaries.....	82.06	82.59
Percentage of current expenses paid for contingent ex- penses, etc.....	15.47	14.55
Percentage of current expenses paid for school libraries.....	2.02	2.11
Percentage of current expenses paid for school apparatus.....	.45	.75
Increase since 1875 in amount paid for teachers' salaries.....		338,956 08
In amount paid for libraries.....		21,185 92
In amount paid for school apparatus.....		8,251 17
In total current expenses.....		365,341 05
In total expenditures of all kinds.....		91,488 12
Decrease since 1875 in amount paid for contingent expenses.....		\$3,052 12
In expenditures for sites, buildings, and school furniture.....		273,852 93

FINANCIAL STATISTICS—Continued.

(b). EXPENDITURES FOR SCHOOL PURPOSES.	1876.	1877.
Cost of tuition per scholar enrolled in public schools during the year-----	\$14 12	\$15 06
Cost of tuition per scholar in average attendance-----	21 62	22 04
Cost of tuition per scholar in daily attendance-----	23 79	24 00
Total cost (current expenses) per scholar enrolled in public schools during the year-----	17 21	18 24
Total cost per scholar in average attendance-----	26 35	26 68
Total cost per scholar in daily attendance-----	28 99	29 06
(c.) <i>Expenditures from unapportioned County School Fund.</i>		
Cash drawn for County Institutes-----	\$2,847 80	\$1,975 85
Cash drawn for County Boards of Examination-----	12,602 88	12,204 29
Cash drawn for postage, stationery, etc.-----	3,728 63	3,248 55
Total expenditures from unapportioned County School Fund-----	\$19,179 31	\$17,428 69
Total expenditures from unapportioned County School Fund for 1875-----		19,496 30
Decrease-----		\$2,067 61
(d.) <i>Valuation of school property.</i>		
Valuation of sites, school houses, and furniture-----	\$5,369,983 46	\$5,617,916 95
Valuation of school libraries-----	173,213 09	207,336 43
Valuation of school apparatus-----	88,299 43	107,990 26
Total valuation of school property-----	\$5,631,495 98	\$5,933,243 64
Total valuation of school property in 1875-----		5,068,678 30
Increase-----		\$864,565 34

STATE OF CALIFORNIA, }
County of Sacramento, } ss.

I, EZRA S. CARR, Superintendent of Public Instruction, do solemnly swear that the appropriation made for the office of Superintendent of Public Instruction, for "traveling expenses," "postage and expressage," and "contingent expenses," for the twenty-fifth and twenty-sixth fiscal years, were expended in the payment, respectively, of traveling expenses, postage, expressage, and telegraphing, and soap, towels, subscriptions to newspapers, and other necessary expenses of the office, as will fully appear by reference to the vouchers on file in the office of the Controller of State.

EZRA S. CARR.

Sworn and subscribed before me, this twenty-first day of November, eighteen hundred and seventy-seven.

D. B. WOOLF, Clerk.

By JOHN P. POOLE,
Deputy Clerk Supreme Clerk.

[APPENDIX A.]

EDUCATIONAL PROGRESS, AS EXEMPLIFIED AT
THE CENTENNIAL EXHIBITION.

[Extracts from the report of Mrs. Jeanne C. Carr, Deputy Superintendent of Public Instruction.]

The laws of California, and the growing importance of school supervision in our own State, having made it impossible for the Superintendent to participate otherwise than by proxy, in the national and international benefits of the Centennial Exposition, and the educational conferences held during its progress, I was sent to gather and bring home whatever I could find in the educational practice of older States and foreign countries likely to prove of advantage, if adopted here. I spent fifty-four days in the critical examination of this subject, besides attendance upon the national and international educational meetings, and incidentally, yet other days, in looking over the agricultural exhibits, with a desire to know what new cultures or methods of culture are likely to be successful here. I also endeavored to obtain all possible information concerning the coöperative systems adopted in Europe to increase the comforts and improve the condition of the laboring classes.

I found these subjects were everywhere running into each other—that in Europe every development of the arts was held to be dependent upon *education*, or the amount of *brain power* expended in their practice. Among the French exhibits, for instance, a whole case of books in the Library Court was marked *Agricultural Education in the Primary Schools*, while Holland, Switzerland, and other European countries, by statistical charts and exhibitions of scholars' work in shops and factories, showed what the spirit of the dawning twentieth century will soon demand of the teacher in America also.

It was eminently fitting that the Centennial Commission should accord an honorable place to *Education*, for, taken as a whole, this grand series of object lessons illustrates the education through which the human race has been passing, from the age of cave dwellings, stone weapons, and bone needles, to that of skilled industry, of the marriage of science with inventions, each more wonderful than the last, until we find the strength of the human hand is increased a thousand-fold, the foot of man, shod with steam, traversing the continents, his thoughts flying on the wings of lightning, his vision enlarged to take in other worlds than ours.

Education knows neither sex, nationality, color, or race; it is universal in its historical evolution and in its prophetic significance. The guiding forces of human thought are felt to have a common paternity, as we see how nearly identical are their results.

Though each international fair has increased the interest taken in this department, the *Jurors* in our Exposition, some of whom served in the same capacity both at Paris and Vienna, do not hesitate to declare this by far the most complete and instructive. The United States has now, for the first time, measured herself with the leading nations of the earth; and if the Exposition bore no other fruit, the friendly intercourse established between teachers of all countries, the comparison of systems and methods, the consequent enlargement of ideas and mutual encouragement, would amply repay the cost. One has but to read such works as that of Scott Russell upon Technical Education—a work appealing to the pride of England to cast aside the trammels of conservatism and lead, rather than follow, in the race for industrial supremacy—to see what the influence of these displays has been upon the development of nations participating in their benefits.

Anything like a comprehensive description of the educational exhibits would of course be impossible at present. I can only notice some of the most impressive lessons I received in their study, during *fifty-four days* of diligent examination and comparison, in company with the practical teachers, whose opinions are of greater weight than my own.

Educationally, four great powers were in close competition, and, were we to judge by the Philadelphia exhibit alone, would distance all others in the race for popular improvement. These are Russia, Brazil, Japan, and the United States. It was a continual surprise when going the rounds day after day; we found in Russia exactly what is most needed to make our educational *outfit* complete—from the lowest to the highest schools; or to Japan to see evidences of the most rapid unfettered progress—a whole nation moving straight as an arrow to its mark, neither halting nor resting, as free from prejudice, apparently, as if it had no history. It was a pleasure, too, to feel that we could teach as well as learn, our noble States of Michigan and Massachusetts leading—the one in the completeness and variety of its exhibit, and the other in virtue of its excellent system of State education.

But somehow, in the general arrangements for the Exposition, the management seemed altogether to have lost sight of the fact that we have more reason to be proud of our schools than of our machines or our agricultural products, for, with the most satisfactory provisions for space, lighting, and adequate display of the latter, the former were crowded into galleries, and was so hid and covered up that numbers of interested visitors went away without finding them. A general directory was found necessary, but this was not printed until the middle of the summer.

It would have been better if the separate exhibitions of the *fifteen* States of our Union had been placed in their own buildings, most of these being sufficiently spacious and convenient for such display.

Pennsylvania *had* not only the finest State building on the grounds, for general and social purposes, but another erected expressly for the display of her educational work, at an expense of fifteen thousand dollars. There many of the most interesting and profitable of the educational meetings and conferences were held, both national and international. There one was constantly meeting teachers from all parts of the world, who found in Mr. Wickersham, the zealous untir-

ing State Superintendent, one ever ready to answer the innumerable questions asked concerning the school system of the United States.

THE GENERAL UNITED STATES EDUCATIONAL EXHIBIT,

Made by Hon. John Eaton, our National Commissioner, was made in the Government building, where also were displayed the Smithsonian collections illustrating our history and ethnology, the army and navy exhibits, our most important patents, our postal system, a vast series of object lessons in the Nation's progress, and industrial resources of the country. Here were the superb photographs on glass of the Powell and Haydon expeditions, opening new wonders of natural scenery; the models in clay of the recently discovered rock and cave dwellings of the ancient inhabitants of Arizona; pre-historic remains and the rude industries of existing aboriginal tribes. The adobe school house, the log school house, were seen in connection with the fine models of noble school buildings in Washington, and together they told the story of progress in that direction; every appliance of public instruction in the United States, from the Kindergarten "gifts" and occupations to the furnishings of Universities and professional schools. This display of our Government covered two and one-half acres.

MASSACHUSETTS.

The Massachusetts educational exhibit filled the eastern gallery of the main building, and contained a complete illustration of school work of every grade and variety. As an illustration of the manner in which that of the *towns* was displayed, I will take New Bedford, where we found handsomely bound volumes showing the drawing, penmanship, composition—results of written examinations. One case contains a duplicate school library; another, the text-books in use and those provided for teachers' reference; still another, the apparatus; while large photographs display the exterior of the building, and still others the various rooms, with the scholars in their seats, or standing during various exercises. Wall charts exhibited the daily attendance, and other charts the percentage of the population benefited. Similar exhibits were made from many other large towns. The corridors were hung with superb photographs of the many noble institutions privately endowed. There was Amherst and Williams, Holyoke and Wellesley, Fair Harvard, in royal folio volumes, filled with pictures of her many halls and the portraits of her honored sons. The benignant face of Agassiz—the world's teacher—looked down upon the thronging crowd. Longfellow was there, and Emerson, with others who are worthy of the laurel crown.

One section of the Massachusetts gallery was devoted to the *Worcester Free* Institute, where master mechanics are graduated, and where the students' mechanical work is so good that the demand for it already exceeds the supply. Among other valuable inventions and appliances, a combined reading, writing, and drawing desk, which can also be used as a dictionary stand, was exhibited. It should be in every school room.

Another section was devoted to the drawings of the Normal Art School, which is training so many of our teachers. The work is highly creditable, and, I am told, a great improvement on that shown two years ago in Vienna.

In another place we have the work of the Massachusetts Institute of Technology, given with great fullness of detail.

I must not forget to speak of the restoration of *sewing*, not fancy needle-work, to its ancient place in the public schools, displayed in the Boston exhibit in eight large albums, containing a graduated, progressive course of exercises, from the simple seam to the fashionable costume, basque, overskirt, and all! The needle having thus intruded into the sacred domain of the "three R's," is likely to hold its own in peaceable company with the pen and pencil, in preparing our young people to be of use in the world.

The school apparatus, organs, and musical charts, models in plaster and wood for art instruction, among which Prang's drawing studies deserve honorable mention, are too numerous to be described. An educational map of Massachusetts shows the locality of every public and private school. Large photographs, ground plans, charts, and reports, display the working of charitable and penal institutions, while the State School Reports, and those of the Agricultural Society, formed a large and valuable library in themselves. All this was in the main building.

Over in the Agricultural Hall, ample space had been given to the display of the Massachusetts Agricultural College, of which an entire chapter should be written, to do justice to the practical value of the College to that industry.

The most interesting and instructive series of wall charts showed the increase and diminution of each staple for a series of years, and the results of experiments with fertilizers chemically suited to each crop. Photographs of the pedigree stock, and a great variety of other illustrations were given, of the scope and usefulness of this admirable institution.

Machinery Hall contained a similar display, from the Worcester Free Institute and School of Technology. Photographs and catalogues of the public libraries in towns and cities were also included in this grand exhibit of what the Bay State is doing for the elevation of her people.

PENNSYLVANIA.

The well filled alcoves and corridors of Pennsylvania Educational Hall contain an exhaustive display of every grade and kind of Public School work, with most excellent school furniture and apparatus. In singular contrast with these supplies for modern demands, we also have one alcove devoted to the illustration of the primitive school house, with its broken stove; the wooden pail, with a *gourd* dipper; the rude benches, adorned with many a jack-knife carving; the English Reader and Spelling Book; Daboll's Arithmetic and the Accidence. These were all the text-books that plagued the children of that day and generation.

What a contrast is this Pittsburg alcove, where large wall photographs display palatial school edifices; and twenty-three imperial folios, as richly bound as though they contained the title deeds of a kingdom are filled with scholars' work.

The State Department devoted one alcove to the journals, forms, blanks, certificates, etc., which are used in its administration; and with this was found the beautiful display from the Soldiers' Orphans' Homes, of which Pennsylvania is so justly proud.

I wish I could exhibit here the excellent pieces of apparatus found in Pennsylvania Hall for use in the study of geography, astronomy, and music. One was a separable model of the United States, the surface being in relief, and well proportioned; another model, filled with water, was an excellent aid to the teacher of primary "notions" of geography.

Fourteen Colleges of Pennsylvania were seen in large photographs, drawings, and charts, illustrating attendance and work, Lafayette College taking the lead.

All the charitable institutions; also, the Girls' School of Design; and last but not least, as illustrating the nobly philanthropic character of her people, was the exhibit from the School for Feeble-minded Children.

OHIO.

The *Ohio exhibit* filled two large rooms in the gallery of the main hall, and was fully up to that of Massachusetts in quality—Cincinnati standing in the front rank among cities. Some of the best original work came from the pupils of the Normal Art School; the penmanship was superior, one volume contained a specimen of the handwriting of every teacher employed, and this was so universally good as to honor the management which has given the city her enviable prominence. For Cincinnati includes in her school system every grade of instruction, including some special industries and professions, and the reflex action from these specialties is already tending to make her general education more practical.

The Cleveland schools also present many points worthy of our imitation. They excel in drawing, using natural objects instead of copies; they also exhibit many beautiful etchings on glass, the work of the pupils. The volumes illustrating the methods of music teaching, dictation exercises in music, were especially admired, musical expression being, apparently, as free as any other. A little paper, published under the supervision of the City Superintendent, Mr. Rickoff, for supplementary reading, in the lower grades, has been adopted in so many other places as to indicate a happy solution of one of our most troublesome questions, viz., that of too many and too expensive readers. This little paper, called "Monday Morning," is looked forward to with the greatest eagerness as a change from the regular diet of the school.

NEW JERSEY.

The most complete showing of school work came from the *State of New Jersey*, ninety-nine per cent. of her schools having presented specimens. These were found in four hundred and thirty-seven volumes, containing fifteen thousand specimens of collective work in penmanship, map, and other drawing, composition, and written examinations. *In no State does the ungraded work of the rural districts compare so well with that of the towns and cities.*

The State Normal School, among other excellent things, displayed an excellent herbarium, prepared by the pupils, accompanied by written analysis of the plants.

CONNECTICUT

Displays her apparatus and charts for teaching the metric system of weights and measures, as required by her school law, with bound volumes of her scholars' work, and a grand encyclopedic exhibit of the literary and scientific products of Yale College.

RHODE ISLAND

Sent eighteen volumes of map drawing, and one hundred and ninety volumes of scholars' work from *nine towns*. She has music and drawing in all her grades, and made a most praiseworthy display of Normal School work.

MICHIGAN

Presented a compact and exhaustive series of exhibits from her primary schools to the University, in a library case filled with handsomely bound volumes, which are to have a permanent place in the State Capitol, and will form a standard by which her future progress can be measured. No selected papers were shown by Michigan, and the uniformity in excellence was remarkable. The photographs of her admirable High School buildings, at Ann Arbor, Howell, Lansing, and other places, won the enthusiastic admiration of our foreign visitors. I was so much impressed with the work of the Agricultural College that I visited it on my return, to find all that has been claimed for the practical teaching of this most vitally important industry fully verified in the workings of the only College where manual labor is a part of the daily requirements. Time does not permit me to say what encouragement to philanthropic effort is found in the records of the Michigan "State Reform School," or of the "State Public School," where all the uncared for children are gathered up, fed, clothed, and educated.

WISCONSIN'S

Display was contained in one hundred and eighty-two volumes of scholars' work, one hundred and fourteen of which were sent by the City of Milwaukee, the largest exhibit from any one city. These were accompanied by a very fine series of photographs of her principal school buildings, and an educational map showing the location and character of every school in the State.

MAINE

Made a small, though very instructive exhibit; the City of Bath showed her text-books, and the average cost per pupil when furnished as formerly by the parents, and now by the Board of Education, the reduction being from three dollars to seventy-five cents. Think how much apparatus and assistance this large margin of savings would provide!

INDIANA

Made an immense exhibit, from fifty cities and towns, forty counties, and thirteen Colleges! Here we had a display of Kindergarten materials and occupations used in the primary schools. Indianapolis

showed the result of nine years' work in drawing; the Fort Wayne schools presented excellent original designs, good herbaria and natural history collections put up by the pupils.

ILLINOIS

Received no State aid in making her display, and the extent and variety of it were, therefore, the more remarkable and creditable. Nine counties presented the entire work of their ungraded schools. The Illinois Industrial University made a noble display. There were four hundred and ninety-four volumes of other school work, not to speak of her numerous Colleges and Seminaries.

MISSOURI,

Too, distances almost every State in the *rate* of her educational progress, as was shown in the valuable reports of Superintendents, and one hundred and eleven volumes of scholars' work of the highest merit.

MARYLAND

Exhibited fine models of her school buildings, and made other valuable contributions, ranking with New Hampshire in extent.

NEW YORK

Made no exhibit, and as California, too, was left outside, I made the most of this bad example of the Empire State, and said: "California and New York were too large to attempt a representation." Privately, however, I placed the two very creditable volumes prepared by the schools of Crescent City, Del Norte County, (in accordance with the invitation from the Department at Washington), upon the Jurors' table, with the assurance that this remotest district, on the very edge of the Indian Reservation, would speak volumes for the rest of the Pacific Coast; and that the twenty-eight millions already expended by a State not as many years old, was an earnest of our intentions for the future.

I have lingered over these home displays as a kind of pacifying introduction to a view of the evidences of progress in other nations.

BRAZIL.

If we wish to know where the profession of teaching is most honored and best provided for, we must go to Brazil. To repeat the words of Mr. De Motta, Chief of the Brazilian Educational Department, will perhaps induce emigration from the ranks we can least afford to have depleted, yet candor compels us to bear testimony to the noble work going on in the southern portion of this hemisphere, under conditions apparently less favorable than ours. Suffice it to say, the teacher in Brazil having once passed a satisfactory examination, becomes a Government official for life, and is promoted, not as vacancies occur, *but according to his term of service*. After five years service, during which he has a comfortable salary with house rent, he receives a small pension, and for every scholar above thirty, which is supposed to be the average number in country schools, he gets an addition to his salary an equivalent

to one-third of the estimated cost of each pupil's tuition. When sick, or disabled, a small extra pension is provided. After ten years service, the salary, pension and perquisites are doubled. After twenty years, it is again increased, and a life insurance policy is then bestowed upon him by the Government sufficient to keep his family from want in case of his death. After thirty years, he is put upon the retired list, and receives the same pay as army or navy officers of a certain rank, but he may even then continue to teach, and to receive a regular salary. So much for Dom Pedro's enlightened policy!

The leading educational State of South America, however, is the Argentine Republic. Chili follows very closely after. The Argentines only number about two millions, against twelve millions in Brazil, and yet they expend two million, four hundred and twenty-five thousand, two hundred and fifty-nine dollars annually for her schools, against two millions, three hundred and fifty-six thousand, seven hundred and thirty-eight dollars in Brazil. With four hundred and fifty thousand children of school age, the Argentines have one hundred and twelve thousand in attendance. The late President of the Confederation, Mr. Sarmiento, founded the first Normal School on the Continent, in the Republic of Chili; he is now past seventy years of age, and blind, and is the present Superintendent of Public Instruction, his whole life having been devoted to the educational elevation of his countrymen.

RUSSIA.

Russia must be known by her works, and these "praise her in the gates." We have been accustomed to speak of Russia as the "land of the Cossack," semi-civilized, ready to pour her savage hords like a destructive tidal wave upon the lands made desolate by Goths and Vandals in other times. But Russia took the world's prizes for technical education at Paris in eighteen hundred and sixty-eight, and also in Vienna, and her display in Philadelphia has astonished every observer. Simultaneously, at South Kensington, England, at Brussels, and at Philadelphia, she spread out the treasures of her Museum of Pedagogy, which has for its object to gather the best educational material from all parts of the world, to adapt, modify, and improve it, and to diffuse it through every part of her vast empire. After being examined and approved by a committee appointed by the Government, these appliances are exhibited in all the districts, accompanied with lectures explaining their applications and uses.

In cartology, the Russians greatly excel. The maps presented were large, painted upon soft thick oil-cloth, in natural colors. Those great patches of brilliant red and glaring yellow, like nothing on the earth, are not used to befog the minds of European children. A geographical and geological model of European Russia, in relief, gives a better idea of the physical features of the country than could be gained by a year's study of books.

It is evident that, whatever else the scholars know, an intense nationality is being fostered in their schools. They are expected to know all about the productions, occupations, history, and resources of their own country. Every school is furnished with relief maps of the different provinces, with botanical and industrial atlases and charts, with specimens of destructive insects arranged in natural

positions on the leaves and branches of the trees they feed upon, with models of these insects which display their structure. Climatic charts are furnished, and there are school collections of furs, accompanied with pictures, and often with stuffed specimens of the animals producing them.

The most complete apparatus is made to exhibit the anatomy of the domestic animals, the *horn* of the ox, with its core, for instance, the foot of the horse, etc. Models of different fishes show their internal structure. There are complete and partial models of the human organism, the eye, ear, etc., and a great variety of other illustrations for the study of anatomy and physiology.

In ethnography the exhibit is exceedingly rich. Frames containing twenty-four small models of the different races inhabiting the empire go with the school geographies. There are more complete sets for the higher schools, which illustrate national costumes, and all the varieties of the human family. Photo-lithographs exhibit the alphabets of different languages. There are a great variety of illustrations in glass, wire, and wood, for teaching Crystallography.

Large separable models of flowers made of cloth, are used in teaching botany, and with these are found cabinets containing specimens of all the woods of Russia. Name any subject about which an ordinary child would be likely to ask questions, and I will name some illustration by chart, model, picture, or specimen, which would give a clear and definite idea of the same, from the model of a silk worm enlarged some ten times, to the great Kremlin of Moscow.

But this wonderful pedagogic show was only a small part of what Russia contributed; the walls of the adjoining court were covered with the drawings and designs from the Imperial School at Moscow. Machinery Hall had a grand display from the Technological School at St. Petersburg, of metal work and constructions of various kinds. The School of Mines sent Professor Nicholsky, with a full representation of the mineral resources of the country, and there one could find splendid uncut gems, amethysts, sapphires, tourmalines, with masses weighing many hundred pounds, of the precious malachite and lapis lazuli. Again, in the gorgeous court, where table services of gold enamel, glittering gems, and marvelous stuffs reminded one of the stories of the Arabian Knights; was the modest display of Madam Torletsky's School for Girls, where perfection of handiwork was seen in the most delicate embroidery. The models already spoken of are the work of Russian women. Want of space will not permit me to speak of the Provincial Schools for training in special industries, or of the munificent provisions of the Imperial Government for their support. We see from these significant exhibits with what giant strides Russia is advancing to a commanding place among European nations.

SWITZERLAND.

Turning from the greatest to the least, we come to Switzerland, which furnished yet more impressive proof of the value of coördinate training of head and hands. These must be seen to be appreciated. Without mines, with a scanty agriculture, Switzerland holds her own solely through the superiority of her educated workmen.

The geological maps of Great Britain were considered marvels in cartology until we saw the great map of Switzerland, as much finer

as the country is more diversified. When the Exposition was half over, there came a huge atlas, showing the locality of every school in each canton, and the annual growth of education for the last half century, with exhaustive statistics. It is almost incomprehensible until one has seen it, what an amount of information is now conveyed by these charts and atlases, so arranged that the eye takes in a glance the contents of many books, and a dash of color is made to serve instead of wearisome columns of figures.

EUROPEAN TRADE SCHOOLS.

Doctors Barnard and Hoyt, and other American educators, have warmly praised the Trades and Artisans Schools of Switzerland, Belgium, and Holland. Their exhibits in Philadelphia commended them to those who have hitherto discouraged the establishment of similar schools in America. We were shown how the industrial education of the people may be in part provided for in the evening displays from adult schools of Paris. We need not be deterred from following these examples by the cost. California is not so much poorer than Switzerland, nor so much more heavily taxed than France.

I learned in the Exposition that ours is the only country where public education is not made directly serviceable in the leading industries, the only country where every boy is expected to become a gentleman, and every girl a lady, in the foolish sense of exemption from a share in the labors which make the worth of individuals or of nations. When I looked into the Belgian school house, I found a cushion fastened upon every girl's desk, otherwise furnished like the boys'. This is to assist them in their sewing lessons, without which no girl is considered educated. There are other noticeable improvements in that school house, a model gymnasium was attached; it was provided with charming sets of object lessons in those common things most important for popular instruction, as, for instance, the flax plant in blossom, in the straw, some of the tow, the cleaned fibre, samples of linen thread, and many varieties of cloth; a small glass tube contained a specimen of linseed oil, and a piece of oil cake completed this illustration of the natural history and economic uses of flax.

Cotton and other textiles were prepared in the same way. The metals, also, with their native ores, were so arranged that the pupils could handle them freely.

A thin partition divides this school house from the court of the Belgian laces, those costly webs worth almost their weight in diamonds, work excelled only by the most marvelous of Nature's, more like the magic tracing of frost, than anything wrought by human fingers; and I could but think that the nearness was significant of the good time coming, when the perfect work and the perfected workman shall be found together.

THE SWEDISH SCHOOL HOUSE,

Bright and homelike, as a place should be where the ineffaceable impressions of childhood are imparted, was the envy of American school mistresses, who hovered around it in droves during their July vacation. No wonder, for it has cozy living rooms attached; the tall

porcelain stove, so cleanly and economical, maintains a summer atmosphere, and every such building contains a schoolmaster, who is, saving the minister, the most influential member of the community.

I found in Dr. Meyerberg, the Swedish Education Commissioner, one of the largest-hearted and most patriotic of statesmen. His account of schools in the far north, where they have only six weeks of school and of summer, where the teacher must go from house to house to meet the demand for instruction, is a testimony to the indomitable energy and perseverance of the race from which we have derived many of our best qualities.

Pictorial representations of the wandering schoolmaster's labors, and life-size plaster groups illustrating the avocations and household life of the people were among the chief attractions of the Exposition.

In the Normal Schools of the northern districts instruction is given both in the Norsk and Finnish languages. There are several Agricultural Schools, Trades Schools, a noble University in Christiania, numbering thirteen hundred students, another in Stockholm, with botanic garden and science department, and, though it shames me to be compelled to say it, Sweden and Norway are ahead of us in the higher education, while Finland and Lapland are better off to-day in respect to their public schools than many portions of the United States.

THE NETHERLANDS.

The exhibit from the Netherlands was very complete, and especially excellent in drawing models and copies. Much attention is given in the schools to economic geography and the knowledge of the commercial products of the Colonies. No other school exhibit interested me so much as that of the Artisans School of Rotterdam.

GERMANY AND AUSTRIA.

Neither Germany nor Austria made a collective educational exhibit, but the results of national treatment of pedagogy as a science were seen everywhere in the book publishers' exhibits, in reports, charts, apparatus, and in meetings and discussions in which eminent teachers took part. If you will accept the statement without proof that Germany is educationally the leading nation in every department, you will find the proofs accumulating with study of their methods. There are two reasons for this, one is, there is no time lost in learning to *spell*, there being an invariable sign for every sound, reading and writing are taught, and spelling comes by nature.

The other is a wholesome rule, laid down in the training school for teachers, that the mind of the pupil shall never be burdened with things beyond its experience, its comprehension, and the observing faculties being systematically developed from the start, the explanation of phenomena, the how and why of things, come naturally, as explanations of such experience. Thus there is no waste of power, every step tells.

As an illustration of method, let me give that pursued in the elementary study of botany. No Latin words or derivations are used. The receptacle is pointed out in the examination of the flower, but the name given to it is "blumen-boden," the "floor of the flower,"

the pistil is called the *fruit leaf*, the stamen the *dust leaf*, and thus the appearance, origin, and use of the parts are indicated in a manner which impresses them indelibly upon the memory.

PRIVATE EUROPEAN SCHOOLS.

Some of the most instructive exhibits of France, Germany, and Switzerland were from private schools, where the philosophy of educational methods is being tested by careful experiments. This is especially true of M. Buest's School, at Hottengen, near Zurich, where reading, writing, and drawing are taught, essentially, together. In his school every child learning arithmetic is provided with a box of illustrating apparatus; if the lesson refers to money, he has his little set of models of Swiss coins and bank notes; if of weights and measures, a set of scales and weights, and children eight years of age make their own perfect illustrations of the cubic contents of bodies, their own relief maps of the neighborhood, and are practically more advanced than ours of ten and twelve.

SCHOOLS IN FRANCE.

I briefly alluded to agricultural education in the Primary Schools of France. Among the text-books was "The Little Farmer," and "The Little Gardener," as pretty children's readers as one could wish to see, abounding in useful knowledge, pleasantly conveyed, of plant and animal life. I found the arithmetics used in the rural communities filled with just such practical problems as the farmer daily meets with, and no boy or girl who had mastered them could fail to know what are the most profitable crops, the cheapest food, the cost of tillage. Nor is this *earth knowledge*, as it is called, taught by books alone. Observation and illustrations of many kinds are added, until the subject is incorporated into the life experience of the pupil. In the schools which correspond to our higher grades, education is everywhere forced into practical channels, as the exhibits of Artisan and Trade Schools fully show.

In short, the division between information giving, and disciplinary studies so-called, is not so marked in foreign countries as it is in our own. What is thought essential for the people to know is put into schools. Among the school lesson cards of France and Switzerland I found one showing the phylloxera, the insect pest which has been so destructive to the vineyards of France, "shown up" in all the stages of its growth, and another exhibiting the anatomy of the berry of the grape, the sap veins and sugar-secreting veins, so highly magnified as to be readily understood.

The Communal Schools for Girls in Paris sent a most beautiful display of useful and ornamental needlework. In the Swiss exhibit, from Canton Appenzell, I found the work of the Zollikoffer Institute, a Normal Training School for Girls, arranged in large albums. There were specimens of plain and ornamental knitting in the greatest variety; all kinds of knitted woolen garments for children and grown people. All the lady teachers of Sweitz are expected to give instruction in necessary needlework; the results of which were shown in albums filled with mending, from the heels and toes of stockings, mended button-holes on shirts and coats, to the daintiest repairing

of lace. Mending of diagonal cloths, and of woolen plaids of several colors, was so perfect as to require the making of its borders in order to have it seen.

All manner of beautiful handiworks, taught in the free schools, such as wood carving, scroll sawing, and even watch making from some of the Cantons was exhibited. I have not space to speak of the voluntary schools for the training of young merchants and tradesmen. The very toys of European children teach lessons of industry.

THE BRITISH EMPIRE.

Fully one-fourth of the space in the Main Hall was devoted to Great Britain and her Colonies. I venture to say that no instructed person went from a thorough examination of that astonishing display unwilling to speak of England as the mother country. Like a true mother, too, she placed her children before herself, and was lost sight of, almost, in the evidences of their greatness. Of Australia, *our* great rival, I cannot speak here, except to say that she meets the people of the Pacific at every turn, with her wines, her wools, her wheat, her fruits, her forests, and distances us by far in the extent and variety of her manufactures. Queensland had the most complete and the best arranged exhibit of any part of the world. Tasmania, first settled by the scum and refuse of Britain's civilization, stood as a witness of the renovating influence of benignant nature. But the LESSER BRITAIN on our own borders, shone conspicuous in education, having nearly as large a display as Massachusetts. The best object cards for natural history instruction were found there; and for the study of history we were shown models in pasteboard of ancient suits of armor, so well made as hardly to be distinguished from real coats of mail; with fac similes of important historical documents, such as Magna Charta, and the death warrants of Mary Queen of Scots; fac similes of old maps, etc. A fine school cabinet of woods illustrates forestry. The Canadian's School Manufacturing Company's exhibit of Toronto, shown in the Ontario Education Department, received the International Judges' award for excellence and cheapness. Their apparatus for teaching chemistry was very superior. All this can be obtained in the United States free of duty.

The needlework from the Royal School of Art, founded for the assistance of decayed gentlewomen, one of the attractions of Main Hall, and the cases containing the embroideries of Queen Victoria and her daughters, in the Woman's Pavilion, though excellent displays of their kind, did not excite so much interest as the garments cut and made by the children of France and Switzerland, for the educated work-woman will surely obviate all the distresses of genteel poverty, without the special patronage of royal persons. I like better the patronage which the Empire of Austria gave last year to four thousand daughters of the nation, in bestowing upon them thorough instruction in telegraphy, and other kindred arts.

MICHIGAN AGRICULTURAL COLLEGE.

Returning from the Exposition to the Agricultural College of Michigan, assurance of the value of practical training in connection with actual farm operations was made doubly sure. A magnificent

estate of six hundred acres has been reclaimed from original swamp and forest by the labor of students. Gardens and lawns, orchards, excellent roads, and the best breeds of cattle are seen. Fourteen of their graduates occupy Agricultural Professorships in other Agricultural Colleges. They are found from Cornell University to the Rocky Mountains. Forty-two per cent. of its graduates are farmers and horticulturists, in the the State of Michigan.

Again, in the Reform School, where the tonic of labor education is applied as the pound of cure to the social waifs and estrays, marked with every hereditary mental and moral disease, I read yet another lesson on the same subject, and could but wonder that we are not ready to apply it as the ounce of prevention. Only in America is it necessary that one should be a pauper, a criminal, or an orphan, to have an equal training for head and hands. Our own necessities call for the industrial education of the young. The example of other nations—these displays in the Centennial point to this as the secret of their industrial supremacy.

CHINA AND JAPAN.

All this time I have not spoken of our neighbors across the Pacific. China made no educational exhibit, but confined its display to fine wares, furniture, stuffs, and the like, with which the world has grown tiresomely familiar. But the collective exhibit of Japan was not excelled, either in value, extent or variety, by any nation except Great Britain; and while it was entirely new to most of the visitors, it was so much more complete than any hitherto made, as to surprise those who have been somewhat familiar with their arts, and with the effects of the wonderful change in their national policy.

General Francis Walker says: "Handiness, aptness, fertility of resource, in some countries, become congenital, and a child is born into the world half an artisan." This seems to be true of Japan, and the fact that so many of the art exhibitors of Europe presented excellent imitations of Japanese ceramic manufactures, showed the esteem in which these are held by artists and connoisseurs. Italy falls far below Japan in the demand for art productions; but, however tempting it may be to tell you of those precious bronzes, of the costly embroideries, and skillful inventions, I must confine myself to the educational progress of the last ten years, which is about the date of the exodus of Japanese scholars into foreign countries. Since then the unique spectacle has been presented of a nation's acceptance of whatever the experience of more advanced civilizations have pronounced the best things, without disturbance or confusion.

To find an educational exhibit from Japan containing every appliance of the best European and American schools, Kindergartens included, and *all of Japanese manufacture*, was remarkable; but when, in addition to these, we saw the beautiful cases filled with surgical, optical, surveying, and other instruments, the profusion of scientific treatises, among which I may mention one hundred and fifty-four volumes descriptive of her agriculture and natural history, works on forestry, tables showing the strength of Japanese timber, from experiments made at the University of Tokio, we thought it a pity that our young men could not, thus late in the day, take Mr. Greeley's advice and "go west;" and the contrast between their readiness and our slowness became almost painful. Taking the Massachusetts Agri-

cultural College as their model, they have induced its President, (Clark), to manage theirs at Sapporo until the movement is fully inaugurated. They engaged the late Chief of our Agricultural Bureau, Hon. Horace Capron, for four years, to prepare the way for this Agricultural College, by introducing the best foreign products and varieties of live stock; and this is but one of a multitude of illustrations of their zeal and thoroughness.

THE JAPANESE DEPARTMENT OF EDUCATION

Consists of a Minister (ranking with our Secretaries at Washington), a Senior and Junior Vice Minister, four Secretaries, and eight clerks. In addition to this, they have a Bureau of Superintendence, consisting of a chief and two assistants, three Inspectors, and three clerks.

Contrast this with our poor struggling Bureau at Washington, its existence threatened at every assembling of Congress, for economical reasons; and in behalf of which each successive National Teachers' Association has been obliged to pledge its most earnest efforts.

But besides all this general support, the Japanese Empire is divided into seven grand school districts, each having its Normal School, with a six years' course of study, each grand district having its officers, corresponding to our State Superintendencies, while the large cities and towns have their independent local organizations.

More than two million scholars, under over forty thousand teachers, have been enjoying the benefits of an education which, to use the language of the law which provides for it, "shall not be confined to a few, but shall be so diffused that there may not be an ignorant family, nor a family with an ignorant member. Learning is no longer to be considered as belonging to the upper classes, but is to be equally the inheritance of nobles and gentry, farmers and artisans, males and females."

The Japanese Minister of Education, Mr. Tanaka, was in attendance at the Exposition, as was Mr. Murray, the Superintendent, late one of the Professors at Rutgers College, New Jersey; and as a result of this, the second visit of Mr. Tanaka to the United States, we hear that a grand Museum of Pedagogy is to be established in Japan, and that the Boston school system is to be the model adopted for the Tenno's capital.

CONCLUSION.

I stood one evening in the Centennial grounds, one of sixty thousand spectators, and saw an air ship filled with passengers, float away into space, until its silken sphere was lost in the aerial ocean. "Who will dare," I thought, "to predict the possibilities of the coming century."

Another voyage of discovery, guided more surely by the hand of science than was Columbus', may bring us tidings from worlds that glimmer in the far fields of the sky. There is no limit to human power when guided by intelligence. The great Corliss engine, itself moving so silently, yet setting in motion those countless driving wheels, those noisy looms, those glancing saws, was but a symbol of the power of education, of the teacher's hand, applying the great motive power of progress.

It was pleasant to see that a large number of teachers availed them-

selves of the advantages of the Exposition, and to notice the added power and enthusiasm gained from its lessons. It should inspire us all to think of the army of devoted men and women under different governments, speaking different languages, who are united in a common purpose, and girdling the round earth with an atmosphere of liberty and light!

[APPENDIX B.]

MECHANICAL WORK.

At the last meeting of the National Teachers' Association, at Louisville, Kentucky, Professor Runkle made an exhibit of several cases of the mechanical work of the students in the Massachusetts Institute of Technology, and gave the following explanation of the methods employed for practical instruction :

In adopting the Russian system, at our Institute, we fixed upon vise work for our first laboratory. We then decided to teach thirty-two students at a time, at thirty-two benches, with thirty-two vises, just as we teach analytical chemistry in a laboratory. The next thing was to obtain a man who had the requisite skill and then the capacity to work himself over according to these ideas. This was a matter of difficulty, for each would almost invariably ask what trade he was wanted to teach. When the right man was found the idea was developed in his mind by asking him what trade he was master of, and could teach, and when these were all named he was asked what fundamental manual skill was most essential in them all. In this case vise work was decided upon.

A diagram, exhibited during the lecture, showed how vise work, as an *art*, underlies several familiar *trades*. A second diagram showed some of the natural divisions of vise work.

Vise work divides into filing, sawing, tapping, chipping, reaming, thread cutting, breast drilling, etc.

Vise work is important to the workers named below: blacksmith, die-sinker, tool maker, machinist, gunsmith, boss finisher, iron mold-maker, jeweler, philosophical, nautical, or musical instrument makers, etc.

The next thing to be decided upon was the tools, and, in our case, tools for filing and chipping were selected.

(A case containing these tools, used at the Institute, was on exhibition during the afternoon. They consisted of a variety of files, chisels, callipers, saw and hammer.)

The next thing we wanted was a series of designs, the working out of which was best calculated to teach the use of these tools.

(A set of these designs was exhibited upon the walls of the room. There were, also, upon the table, a set of drawings of these designs, made by the student himself. These drawings were soiled and blackened, and had actually been used by a student in working out the designs in metal. A case containing completed products corresponding to these drawings, and for each product the corresponding blank from which it was made, was also on exhibition, and the object of much interest. This case contained the actual work of one student during thirty lessons of four hours each, and comprised the following objects with their corresponding blanks: In filing to line, all cast iron, 1, a flat surface; 2, an octagon; 3, a wedge; 4 a square hole; 5, an oval hole. In free hand filing, bench vise, cast iron; 7, cheek work; 8, ring work. In free hand filing, hand vise, steel wire, 19, a point; 20, a rifle sight; 21, a screw blank; 22, a screw. In filing, 9, a cast iron fitting. In filing, fitting, 10, a steel rectangular slide; 11, a steel dovetail slide. In chipping with flat chisel, 14, a half cylinder of wrought iron; 12, a chamfered surface of cast iron; 12, a reversed curved surface of cast iron. In chipping with half round chisel, 15, a half round chanfer in wrought iron; 18, a fluting in steel; 18, a spline work in steel. In sawing, etc. 16, sawing in cast iron; 17, sawing and chipping in wrought iron; 6, sawing and filing to template in wrought iron. There was also on exhibition a case containing the products of fifteen lessons of four hours each in forge work, but we cannot enumerate them.)

Now the method is this: The student makes the drawing of the design, and in so drawing gets a vivid idea of the shape or form required, and some idea of how to produce that form. The teacher asks for this idea, and nothing is done until the method is clear in the mind of the student. An analysis of the work to be done is placed upon the blackboard, and a certain value assigned to each element. The student notes this analysis and goes to work. The student thus knows himself just how much each point, perfectly done, will count in the inspection, and by aid of the analysis he is generally able to predict the quality of his own work within five per cent. In the laboratory thirty-two students are doing the same piece of work

at the same time. Thus the teacher has his own attention concentrated upon one point, and is able to oversee a large number of workers.

(The remaining remarks were mainly disconnected statements, made in answer to questions.) The following is their substance:

At first we gave to the student five hours to do what a workman would do in one. At the close we gave him two hours for it.

Not a man out of fifty-two students failed in this work, although worked in it more vigorously than in other studies, and in only one case was a student obliged to do the same piece a second time. There was no stumbling of the student, because the teacher was always present and always watching.

It was the most astounding educational product that I have ever seen. Have questioned practical mechanics who have come to the Institute, as to how the work compared with that of apprentices, and have invariably received the answer that it was far superior. Have asked them how it compared with the work of journeymen, and they have replied that they would choose a majority of our students in preference to a large proportion of the journeymen in their employ. They are astonished when told the time in which the work was learned and performed, and will hardly believe it.

The work of twenty-eight of the fifty-two students was worthy of public presentation. I think the method can be applied in any school and to any pupils who are physically able to do the work.

[The speaker here described an experiment in the City of Boston in which the method had been tried with very elementary students with very satisfactory results. He also distributed pamphlets containing an account of this experiment.]

In the Institute of Technology this work was done in addition to the regular studies, and I have yet to hear that it was done to the prejudice of their standing in those studies. As to the cost of this instruction, by having four drawers and four sets of tools to each bench we can put one hundred and twenty-eight students through this course in ten weeks. This will work our laboratory six days in the week and eight hours per day. In a year of fifty weeks we could put through five times as many, or six hundred and forty students in one year. Now for expenses (the rooms we had): It cost, first, about one thousand dollars to fit up the rooms with benches, vices, and tools, each set costing five dollars and sixty cents. We paid our teachers one hundred dollars per month. I consider it feasible to have a High School with a shop of this kind that will not cost much more than it does now. Would put the pupil through one school at a time, as vise work; then forge work; then wood work, etc. Would make these schools so educational in their character, that whether the student ever used the skill or not, the schools would be justified as an educational feature.

All begin the same piece of work at the same time, and when it is finished the pupil passes it in.

We don't make saleable articles, because such are not the best to make for educational purposes. When the pupil makes an article that is fit to sell, it is not best, in an educational view, that he should make another of the same kind. The expense, too, is far less when articles are not made to sell.

So far from industrial culture interfering with intellectual culture, it really lends to it a powerful support, by strengthening the character and developing the moral energies. It is upon these moral energies that the entire value of human character depends. The intellect itself cannot attain a manly development without the development of a manly character.

While industrial education thus becomes an assistant to intellectual growth and mental discipline, it is destined to revolutionize the world in its social condition, and that revolution is now beginning. It will certainly double the productive power of more than a million of laborers. If it makes these laborers (now worth a dollar a day) worth two or three dollars, it will do more to elevate our population in the social scale, increase the general prosperity, and terminate the conflict of capital and labor than any agency now in the field of progress.

Moreover, it will elevate the mechanic arts to an extent not dreamed of at present. The medical profession would be in a degraded condition, indeed, if it were acquired only by nursing the sick under a physician without schools, literature, or instruction. The mechanic arts acquired only by apprenticeship, without any thorough intellectual teaching, are in that degraded condition to-day, and industrial education will do more than books and colleges have done for the professions. It will elevate their social status, increase their productive power, and give us a new industrial world.

[APPENDIX C.]

SCHOOL WORK-ROOMS AND SCHOOL GARDENS.

[By DR. ERASMUS SCHWAB—TRANSLATED BY EMMA MARWEDEL.]

The most important educational problem of our day is the introduction of "industrial education" into the existing organism of our Public Schools.

In all civilized countries the same tendency is seen towards unity and completeness of the different parts of the system, to a harmony of educational ideas with popular needs—their common aims may be thus broadly stated: "To educate both morally and intellectually skillful and useful members of society for their own happiness, the welfare of the community, and the honor of the State." In short, the schools are designed to prepare each child for self-support—for domestic and public duties.

Every candid and reasonable mind accepts these views as ideally just, but many honest differences of opinion exist when we consider the means for putting them into practice.

The fact that a large proportion of our children leave school forever at an age when their powers of reason and will are only at the first stage of development towards self-activity or character, creates a doubt as to including more than is at present attempted as the legitimate work of the school. Already physiologists and physicians complain that our children suffer from too much and too many studies. If we cannot extend the period of school life for the masses, or hasten the period of development in a degree which will enable the child to meet the necessities of its existence with some degree of preparation to act freely under their own moral control, we must admit that our present system is a failure.

With the failure in these directions we must admit that a general aversion to labor, especially to every form of manual labor, is coexistent if not a resultant of our system, that an undeniable lack of public spirit, of habits of self-denial and frugality threaten the best interests of society. While we are not ready to lay the responsibility for these evils at the school house door, we are all agreed in believing that the Public School is the one grand agency for the right development of character and morality in the young. While it is true that religious instruction has been taken out of our schools without an attempt to substitute instruction in morals and ethics, we wish to show that no true moral growth is possible without *practical* development of the faculties.

In noticing some of the points wherein our schools fail in preparing the pupil to live; and the reasons why they fail, we shall observe:

First—Our teachers do not themselves understand the philosophy of education, how to develop systematically, from the first impressions made on the child, so as to use these as a foundation for the knowledge of real things (*realien*) and their relations.

A certain amount of this knowledge is indispensable for any degree of progress.

Yet it is found that when the perceptions have been so trained as to make a foundation for improvement, and a considerable actual knowledge imparted, the pupil forgets it in a few years. This does not prove that the attempt was made too early, but rather that the method is wrong.

Experience teaches us, more and more, from day to day, that a child will retain in its memory only what is incorporated into its life—it will forget what it has seen or heard, but rarely or never what it has accomplished through its own efforts.

Second—The successful scholar has not thereby attained the practical ability or capacity which is needed in after life, nor does good scholarship secure a worthy character.

The coördinate development of *moral* and intellectual faculties should never be lost sight of in the scheme of public education; the foremost duty of the State consists in the training of diligent, moral, energetic citizens, *not prodigies of learning*.

With this end in view the school system should aim directly to the following points:

- (a.) To develop, systematically, the power of clear and distinct perception.
- (b.) To develop the power of endurance and responsibility.
- (c.) To develop the power of self-help and self-control.

In these three points lies the whole secret of a true public education. Clearness and distinctness of perception is not only a pre-requisite of all successful labor, but for the right comprehension of the *duties of life*. Without this there can be no responsibility, no moral action.

Labor is the mother of virtue, therefore *self-help* and *self-control* lie at the very foundation of individual or national character. Without activity there can be no character, and activity founded upon virtuous sentiments is the highest point to be reached in our general educational efforts.

Conceding the obligation resting upon the schools to make their instruction more practical, and to introduce labor as a means of education, we should inquire:

1. How can our Public Schools furnish this valuable education?
2. In what form and to what extent shall actual work be introduced to the masses of our people as a means of education?
3. Has our Public School to give up its present character and mode of teaching altogether, or is it possible to incorporate Labor Schools into the organism of our Public Schools, as a natural outgrowth and completion?

Our aim is not to attack the present system, to pull down what is really valuable, but to fill an acknowledged void, and remedy a defect which each year renders more and more conspicuous.

Nearly every good Public School in Germany gives instruction to girls in handiwork, and we affirm that other Labor Schools will have the same character and results. In this training of girls, not only technical instruction in work, but knowledge of materials, tools, economies connected with these, is imparted, with the more valuable moral lessons of order, diligence, patience, calmness, taste, and neatness.

No *hand* works with precision—it is the mind directing it. An *unskilled* woman's hand proves an untrained mind.

Schools for the training of women in skilled industries are found in all the cities and many of the villages of Europe—in Switzerland, Germany, France, Belgium, and lately in England and Italy.

Sewing, mending, cooking, washing, dressmaking, pattern designing, wood sawing, and carving, lithography, photography, porcelain painting, the care of children, and hygiene, are taught in these schools. Stockholm has an Industrial School for five hundred women and one thousand young men, furnishing instruction free of charge, in all the leading industries.

The objection is often made that "work," though a valuable part of education, does not properly belong to the school, but should be taught in the home, and in later life, when one's business is determined upon. But home education in industrial arts is beset with precisely the same difficulties that other education would be if left to family and individuals. The ignorance of the great masses of parents, and the conditions of the homes, make such instruction impossible until a better trained generation have been fitted to educate at home. Then, and not till then, will there be a true and intelligent coöperation between the home and the school.

The character of our schools determines our future. Their improvement is equally the concern of the pedagogue, the philanthropist, and the statesman. The gain through the systematic introduction of Labor Schools, similar in their scope to the long established Girls' Labor Schools, has been thoroughly tested. It is not too much to say that our modern pedagogic demands that the entire instruction of the child should be practical. The best illustration of how this may be done is found in Dr. Erasmus Schwab's School Work-rooms and School Gardens, in which the ordinary instruction given in natural history, natural philosophy, geometry, etc., is practically illustrated in a series of horticultural and mechanical labor, adapted to the age of the children taught. Austria and Prussia have given the sanction of governmental patronage to these institutions—the small province of Silesia having two hundred and forty-five of these School Gardens. In Bohemia, Galicia, Steiermark, the number is rapidly increasing, and provision is made for the training of teachers for these schools. The gardens are beautifully laid out, the State furnishing the stock of seeds and plants, with colored working plans, adapted to the simple or more developed wants of the community in which the schools are located. The fruits, leguminous and forage plants, "hoe plants," wall fruits, and berry bushes, commercial and medicinal plants and flowers, are included in this curriculum for a public country school. The child handling these objects daily with its own fingers, learning to create beauty and use, directing its whole attention to it, comes into a secure possession of its knowledge. Theory and practice are no longer opposites, but are seen in a true reciprocal relation to each other. That which has been found to be the chief power of the Froebel system is thus carried forward into more advanced education. We also find, as in the Kindergarten methods:

1. That mechanical occupations are of immense practical value in developing independence and self reliance.
2. The irresistible power of example, especially powerful in young children, is directed to the highest ends.
3. The development of general activity into inventive faculty.
4. The development of individual capacities and tastes, for want of which thousands of our most talented youths are wrecked, and found in bar-rooms, lunatic asylums, and prisons.
5. Its value in maintaining a healthy equilibrium between the mental and physical faculties. The medical profession almost unanimously commend the Kindergarten for its physiological value. Here we have a happy antidote for confined and cramped positions, vitiated air in the school-room, and kindred evils.

Conceding the benefits to be derived from the school work-shop and garden, how can we adapt these to the present form of the public school?

No positive rules can be laid down applicable to every case. They must depend upon local circumstances and needs, upon the means available for apparatus and necessary facilities, and

upon the number and fitness of teachers. Wherever the Kindergarten has been established it will form a model; the school workshop will be its natural complement. Pasteboard work, wood cutting, and sawing, for which cheap materials and manuals can be found everywhere, (the wood has been furnished from cigar boxes for some of the German schools.) The first exercises are in simple tools, the gimlet, file, rasp, and chisel. Occupations in leather, in making flowers from paper, or muslin, are well adapted for girls, and if, in either sex, there is any latent talent for plastic art, it will be developed in the exercises in modeling in clay, paper mache, wax, plaster of Paris, and finally in soft stone.

The knife for wood carving should be in the hand of every child, as it is in Denmark and Switzerland. Each child should be taught to keep its garments in repair, and, if practicable, to cut them. Cooking and bread-making should be taught to girls from twelve to fourteen years old, and the care of the little ones. If possible, a green-house should be connected with the school.

The best tools of all nations should be at hand. A cabinet, or museum, of interesting objects in the neighborhood, illustrating its history, natural history, or mechanical inventions. The collection and arrangement of these museums should be the work of the pupils, who, after having completed their own, should be encouraged to make a second one for exchange with some other school, in another country perhaps, thus forming, in time, a splendid cabinet, of which any rural neighborhood might be proud.

The following description of the school work-room and school garden exhibited at Vienna will convey a better idea of what is required for these institutions:

The school work-room was not a special room, but the Turner Hall was made to serve the purpose. It was forty by twenty feet long, giving space for at least forty to fifty children to be instructed in drawing, and for nearly one hundred children when occupied in mechanical work.

There were small tables long enough to have three children seated on each side, with plain stools to sit on. As soon as these six children begin to work independently, two pieces of board are laid cross-wise over the table, extending it so that there will be room for ten children helping each other.

These tables were so arranged that they could easily be put aside. Another kind of folding tables were fastened to the walls, also complemented by the boards.

In plaster work the instruction was given in the following original manner:

As soon as the child had acquired the necessary ability in wood sawing and wood carving, it is regarded as qualified for the higher grade, viz., modeling. The child models in clay the design already executed in wood, and then proceeds to more original ones. Free modeling or carving in wood is taught also on the same principles. Very beautiful specimens of work is shown from the school work-rooms of Denmark.

Parts of machinery, and, indeed, entire models were shown, proving great talent in construction. Baron Von Welkheim, of Vienna, has invented a very complete joiner's bench for boys from thirteen to fourteen years of age, and a joiner's bench for little children was sent by Colonel Klausen Kaas, the highly respected founder of the Industrial School, at Stockholm, and whose influence has established a net of these school work-rooms through two hundred school associations in the State of Denmark.

The school garden shown at Vienna was arranged on a perfect scientific basis—presented and executed by the Over Gardener, Heinrich Mödling, of Austria.

[APPENDIX D.]

LAND DECISION.

DEPARTMENT OF THE INTERIOR, GENERAL LAND OFFICE, }
WASHINGTON (D. C.), April 7th, 1877. }

Register and Receiver, Stockton, California:

GENTLEMEN: I inclose herewith a copy of the decision of the Honorable Secretary of the Interior, dated the fourth instant, in the case of L. J. Poley and Henry Thomas *vs.* the State of California, in which he holds that the title to sections sixteen and thirty-six vests in the State at the date of survey, when the land is not known to be mineral, or is not treated as such by the Government. You will inform all parties in interest and acknowledge the receipt hereof.

Very respectfully, your obedient servant,

J. A. WILLIAMSON, Commissioner.

DEPARTMENT OF THE INTERIOR, }
WASHINGTON (D. C.), April 4th, 1877. }

SIR: I have considered the case of the State of California *vs.* L. J. Poley and Henry Thomas, involving the right to the northeast quarter of southeast quarter of section thirty-six, township three south, range thirteen east, Mount Diablo meridian, Stockton, California, on appeal from your decision of June twenty-sixth, eighteen hundred and seventy-five.

The State claims under the school grant. Poley and Thomas apply for a patent under the Mining Act. The township was surveyed in December, eighteen hundred and fifty-four, and the plat was filed in the Local Land Office March fourteenth, eighteen hundred and fifty-five.

The placer mining claims appear to have been located in the year eighteen hundred and fifty-eight.

It will thus be seen that the question presented is, whether the State of California has a legal title to the land in sections sixteen and thirty-six, where it is ascertained, after the survey and identification of said sections, that the land therein is mineral.

By the sixth section of the Act of March third, eighteen hundred and fifty-three, the sections above designated were granted to the State of California for school purposes, and when the lands were surveyed the title of the State attached to the same, and, if there was no legal impediment, became a legal title. (18 S. Howard, 173.) After a very elaborate discussion, my predecessor, Mr. Secretary Delano, held that Congress, by the Act of eighteen hundred and fifty-three, did not intend to grant, and did not grant to the State any mineral lands which, by survey, are shown to be in sections sixteen and thirty-six. (Copp's Mining Decisions, p. 109.) Accepting this conclusion as the correct one, the question still remains, did the title to lands in said sections vest in the State, upon survey, if their mineral character was unknown at that time, and the same were regarded by the officers of the Government as any ordinary public land, not reserved or otherwise appropriated, but subject to disposal under the general laws of the United States?

It must be held that it did so vest, unless there was an express prohibition existing by virtue of some law. It would seem that it was the intention of the framers of the Act not to grant any of the mineral lands to the State. Mr. Hall said, in the House of Representatives, on the day of its passage: "There are some donations made to the State of California, but they are precisely the same as those made by the other States of the Union; but in the clauses making the donations it is provided that the mineral lands, and the lands reserved for other public uses, shall be excepted." Mineral lands are reserved in all cases. (Congressional Globe, vol. 26, p. 1,038.)

In support of this theory, the twelfth section of the Act may be cited. By its provisions seventy-two sections of land were granted to the State for the use of a seminary of learning, and mineral lands were excepted. But it will be observed that the lands were to be selected by legal subdivision, and by an express provision in section three of the Act, none but township lines were to be surveyed when the lands were mineral. Hence, the prohibition was well defined and easily followed. The same remarks will apply to the grant made by section thirteen of the Act for the purpose of erecting the public buildings of the State.

By the sixth section of the Act under consideration, all the public lands in the State of California were declared subject to the preëmption laws, except "sections sixteen and thirty-six, which shall be and are hereby granted to the State for the purpose of public schools in each township."

There appears to be no words of limitation or restriction in the clause making the grant. The words are absolute and unqualified. The sections are excepted from the operation of the

preemption law, together with lands otherwise appropriated or reserved by competent authority, or claimed under a foreign grant, and mineral lands; but I know of no rule of construction of language that would justify an interpretation of the words used in the granting clause that would, in effect, be a limitation of said grant. This view does not, I think, conflict with that expressed by Secretary Delano, for, by section three, above cited, lands known to be mineral could not legally be surveyed or designated as school land. In compliance with the doctrine established by Courts, it must, I think, be held that the title vested in the State at the date of survey, when the land was not known to be mineral, or was not treated as such by the Government.

If, following the doctrine of the Courts, the grant of school lands takes effect at the date of survey, can the character of the land, subsequently determined, change or affect said title; if it can, for how long a period can such change be effected? If for three years, why not for ten, or fifty, or after the title derived from the State has been transmitted through numerous grantees? For lands confessedly non-mineral at the date of survey, may, many years thereafter, be ascertained, through the improvements in mining operations, to be valuable as mineral lands.

To maintain such a doctrine might result in placing in jeopardy the titles held by grantees to all school lands in California, and could only be authorized by the most positive and clearly expressed provisions of law. In my opinion, there is nothing in the Act which can thus be interpreted. I must, therefore, hold, that the discovery of the mineral character of the land in sections sixteen and thirty-six, subsequent to survey, does not defeat the title of the State to the same as school land. The case of *Sherman vs. Bruck* (45 Cal., 656) is cited by counsel. In this case the Court held that "the title to each sixteenth and thirty-sixth section, upon its being surveyed, vests absolutely in the State."

This decision was reversed by the United States Supreme Court at the present term.

After a careful examination of the case, however, I do not think that the question of the title of the State to mineral lands is involved, or that the decision in any way affects that question. It is not intended to assert that the title of the lands in said sections passes to the State upon the survey under the provisions of the Acts of July twenty-sixth, eighteen hundred and sixty-six, and July ninth, eighteen hundred and seventy, said lands at the date of survey being recognized and regarded as mineral. The views expressed by Secretary Delano, before referred to, will continue to control the Department in the disposal of lands thus designated.

There are other questions presented in the case under consideration, but if the views above expressed are correct, their consideration is not called for. Your decision is reversed, and the papers transmitted with your letter of September tenth, eighteen hundred and seventy-five, are herewith returned.

Very respectfully, C. SCHURZ, Secretary.

Hon. Commissioner of General Land Office.

The State Land Commissioners, in their report, say :

The sixteenth and thirty-sixth sections of land in each township which were granted to the State by the United States for the purpose of public schools. Also, *indemnity lands* (so called), being lands in lieu of sixteenth and thirty-sixth sections to which the State became entitled by reason of the loss of the sixteenth or thirty-sixth sections of any township, under the provisions of the Act of Congress, approved March third, eighteen hundred and fifty-three, granting the sixteenth and thirty-sixth sections, or lands in lieu thereof, to the State. (10 U. S. Stat. at Large, 244.)

The two classes of land above named have constituted by far the largest amount of land which has inured to the State under any one Congressional grant, and the State has sold and disposed of a much larger quantity of land, by virtue of this grant, than any other, and, perhaps, than all the others combined.

Under this grant there has accrued to the State one-eighteenth of all the public lands surveyed by the United States in California, amounting to two million three hundred and twelve thousand six hundred and fifty-three (2,312,653) acres. In addition to this, the records of the Surveyor-General's office now show that there has been, up to the present date, listed and certified over to the State by the United States, about six hundred and fifty thousand acres of land in lieu of sixteenth and thirty-sixth sections, and as indemnity for such last named sections where the same have become lost to the State by reason of being embraced by Spanish or Mexican grants, preemption, and other private claims.

A very large amount of indemnity land has been sold and disposed of by the State which has not yet been certified over by the United States to the State—an amount equal to, or perhaps greater than that so certified.

It may be proper to state that in the case of the disposal of the sixteenth and thirty-sixth sections in place, no certification or listing is required, as the purchaser takes title directly from the State, by virtue of the Congressional grant. But in case of land selected in lieu of a lost sixteenth or thirty-sixth section, one not in place, such indemnity selection must be approved and certified over to the State by the proper authorities of the United States before the State purchaser can acquire an absolute and perfect title from the State. It further appears that under this grant there will yet accrue to the State, of the public land to be surveyed, two million five hundred and eighty-nine thousand and five hundred (2,589,500) acres.

It will thus be seen that this was a grant of no ordinary magnitude; and had these lands been prudently and wisely managed and disposed of, the people of the State need never have been subjected to any direct taxation for the support of public schools.

[APPENDIX E.]

FREE TEXT-BOOKS.

The following extracts from the last report of the Superintendent of Public Instruction of Wisconsin, exhibits the present status of the free text-book question. May not the right to choose, purchase, and own their text-books, under proper restrictions, on the part of Trustees and Boards of Education, thus recognizing the right and capacity of the people for self-government, be a solution of our present text-book dilemma?

In January I sent a circular to the various eastern cities and towns in which the *free* plan has had full trial, requesting answers to certain questions. I select the following from the responses received:

From PATERSON, N. J.:

"Question 1. To what extent are text-books furnished free to the pupils in your schools? Ans. All are furnished with the books required.

"Q. 2. How long have they been so furnished? Ans. I cannot tell, but I think it has been so since the schools were organized.

"Q. 3. What are the results in respect to economy? Ans. It is a great saving.

"Q. 4. What are the results in respect to school efficiency, attendance, etc.? Ans. Excellent.

"Q. 5. Are the books as well cared for by the pupils as if owned by them? Ans. They are.

"Q. 6. Does the plan give general satisfaction to those concerned? Ans. It does.

"Q. 7. What are your regulations governing the distribution of books? Ans. Each pupil must replace any books lost, damaged or destroyed. I send you my last annual report, in which you will find question seven fully answered.

"Very respectfully,

"WM. J. RODGERS,
"Superintendent."

The above shows all the questions of the circular.

From FALL RIVER, Mass.:

"Answer to question 1. All the text-books and stationery used in the school are furnished free.

"Answer to question 2. They have been so furnished nearly four years.

"Answer to question 3. The cost is not one-half, under this arrangement, what it would be if each pupil furnished his own.

"Answer to question 4. The books are now ready on the first day of each term, and the attendance is very much improved.

"Answer to question 5. The books are very much better cared for. This may seem strange to you, yet it is a fact.

"Answer to question 6. It gives general satisfaction. I have yet to hear the first complaint against the plan.

"Answer to question 7. See enclosed label (given below).

"Yours very truly,

"W. CORNELL, JR.,
"Superintendent of Schools."

*Seal
of the City
here.*

PUBLIC SCHOOLS.

THIS BOOK BELONGS TO THE
CITY OF FALL RIVER.

It is lent to the Teacher of

Morgan Street Grammar School,

Room No.-----, Book No.-----

TS Books must be accounted for to the Superintendent by the teachers at the close of each term.

Teachers may allow pupils to carry their books home for study, but in case of loss or material injury the book must be replaced at once by the pupil.

To mark upon or otherwise deface any book furnished by the city must be regarded as a serious offense.

Teachers shall be held responsible for the proper account and care of books.

From NEWARK, N. J.:

The following valuable information comes from this city:

“NEWARK, N. J., February 3d, 1877.

“DEAR SIR: 1st question.—Ans. I send you a list of books, stationery, etc., furnished entirely free. (The list embraces everything used in all grades, from Primary to High School, inclusive.)

“2d question.—Ans. Twenty-five years.

“3d question.—Ans. As it regards economy, the accounts show that for the last ten years the books and stationery have cost an average of less than seventy-five cents a year to each pupil, including Primary, Grammar, and High Schools.

“4th question.—Ans. Under this system there is no excuse for a pupil's absence on account of the necessary books or implements for work; consequently we believe the attendance is more regular, and pupils will necessarily progress more rapidly than they otherwise would, thus adding greatly, we believe, to the efficiency of the schools.

“5th question.—Ans. I believe they use their books in school as well as if they were their own. Primary pupils are not permitted to take their books home, and others only one book for studying a lesson. Pupils are required to cover each book with strong cloth. The books given to a class are examined every two weeks by the teacher. If any book is lost or willfully marred or defaced, the pupil is required to pay for such damages, on penalty of dismission.

“7th question.—Ans. Proposals are solicited from several parties for furnishing books as they may be needed, according to schedule furnished. The one who receives the contract prepares himself with the necessary supply.

“When a principal needs books for his school he makes an order on the Secretary, keeping a duplicate himself. The Secretary approves or refuses as he thinks wise, and keeps a duplicate in a book purchased for the purpose, then the order is sent to the contractor who supplies the order to the schools. A class receives a set of books, which they use until they are promoted to a higher grade.

“These books are left behind for the class below, and so everything in that grade in the way of books, stationery, etc., remains until worn out.

“I believe the method adopted of furnishing books, etc., is a saving of fifty per cent. to the patrons of the schools over that of each pupil furnishing his own.

“Please find below the average number of pupils enrolled, and the entire cost of books and stationery for the years eighteen hundred and seventy-three-four-five-six:

YEARS.	No. Pupils.	Cost.
1873 -----	10,302	\$7,607 10
1874 -----	10,867	7,649 05
1875 -----	11,518	8,183 07
1876 -----	12,198	8,223 10
Total -----	44,885	\$31,662 32

"This aggregate cost includes books, etc., for the evening schools, the cost of which is about three hundred dollars a year, and the evening school pupils are not included in the number given you. So that the cost for the day school pupils will be a trifle less than the sum I named—about seventy cents.

"Respectfully yours,

"GEO. B. SEARS,
"City Sup't Public Schools."

From CITY OF NEW YORK:

Hon. Henry Kiddle, City Superintendent, write as follows:

"OFFICE BOARD OF EDUCATION,
NEW YORK, February 8th, 1877. }

"DEAR SIR: Yours, with interrogations in regard to text-books, received, to which I take pleasure in responding:

"(1.) Text-books are entirely free in New York.

"(2.) Upward of forty years.

"(3.) I cannot answer this question. Of course, the supplying of books adds a large amount to the expenses of the system. Whether, on the whole, the books would cost more or less if supplied by parents, I am unable to say. There is, however, great economy of time to our principals in the system of free books.

"(4.) I have no statistics bearing on this point. There can be no doubt, however, that the schools are more efficient and the attendance of pupils larger, by the operation of the system of free books.

"(5.) We enforce the greatest possible care of text-books by the pupils.

"(6.) No dissatisfaction has ever been expressed with the school law on this account.

"(7.) I send a copy of the manual of the Board, from which you will be able to obtain a full answer to this interrogatory. I shall mail also some blanks, etc., referring to the matter.

"With much esteem, yours truly,

"HENRY KIDDLE,
"City Superintendent."

From LEWISTON, Me.:

The following letter is from Thomas Tash, Esq., whose admirable communication published in my first annual report was one of the strongest arguments for free books there presented:

OFFICE SUPERINTENDENT PUBLIC SCHOOLS,
LEWISTON, ME., February 3d, 1877. }

"DEAR SIR: Yours of the twenty-sixth instant is at hand. I send you two copies of city school reports, in which the answers to your questions are satisfactorily given. As time brings us experience, the 'free text-book' plan commends itself still more favorably. Should you have in your office our State Superintendent's Report, eighteen hundred and seventy-three, on page seventy, etc., you will find our experience stated, since fully verified. I will also here answer your questions in order but briefly, hoping it may be of some service to you:

"1. We furnish text-books and every other needed school appliance to all our schools of every grade.

"2. We have furnished in this way about five years.

"3. School books, stationery and other appliances do not cost the city much, if any, over half the cost to citizens; and if we consider the *time books are used*, not nearly in that proportion.

"4. Free text-books add greatly to the convenience and efficiency of our schools, and much to school time. Teachers fully concur in this.

"5. Books are much better cared for than when owned by pupils, and are entirely free from pencilings and obscene drawings, etc.

"6. *All* express themselves satisfied with the plan; none would *care* to oppose, I fancy. The people are for it, so politicians cannot be against it.

"7. Books are furnished to the schools, for the use of the scholars, under the direction and care of the teachers, who are held responsible for their use, and to see there is no abuse. Children carry them home freely, but all are kept in the school rooms in vacations. Each book is stamped with city or office stamp and properly labeled. Reader, speller, arithmetic, etc., No. 1, is placed in desk No. 1; 2 in 2, and so on; so each child is responsible for that number. If they

change desks, child No. 1 may be charged books No. 1, etc., so books can be easily looked up in case of question.

"All books, so far, have been purchased by the Superintendent of Schools, directly of publishers, at forty per cent. off retail prices. When we exchange books we get one-half and ten per cent., or fifty-five per cent. off retail prices. Books have been distributed to teachers from Superintendent's office, on their order. This adds to the work of the office. We now propose to allow one of our merchants five per cent. on cost, the cost being same as above, and we order of him, or sanction teachers' orders; then the city will deal with but one person, and this office will be relieved of all the work of receiving and delivering material. This, I think, will suit us much better, and the expense be, on the whole, no more.

"Hoping that as a State Wisconsin may lead off in *requiring* all needed school material furnished free to her schools,

"I am, respectfully,

"THOMAS TASH."

The City Superintendent of Trenton, N. J., writes that books are furnished in that city only to the indigent, but says:

"I believe the free plan to be the proper one, more economical and more efficient. I am endeavoring to have our Board adopt it, and expect ultimately to succeed."

The City Superintendent of Troy, N. Y., also says that in that city books are loaned only to those who lack them, through poverty or willful negligence of parents or guardians, but adds, in answer to question 3:

"I can give no reliable information on this point, but I *believe* that it would be true economy to furnish, at the public charge, *all* books for pupils in primary and intermediate departments." He also adds, in response to question 4, that free books to those who need them are "decidedly favorable to the *efficiency* of the schools, adding to the attendance the names of *nearly* all who receive the books," and that the books are generally well used.

Dr. Wm. T. Harris, the well known Superintendent of the Schools of St. Louis, writes that books are furnished free to indigent pupils in that city, to the number of five thousand two hundred or thirteen per cent. of all enrolled, that they have been so furnished for twenty years, at a cost to the Board of about one dollar per pupil per annum. He reports that the free plan "greatly aids" school efficiency, attendance, etc., and says, in answer to the question whether the books are as well cared for by pupils as if owned by them, "Yes, better."

But citations need not be further extended. Those here given, to say nothing of those presented in the two previous reports, show conclusively that free text-books are no longer in the domain of experiment. From New York, with its forty years trial, as from Lewiston, with one of five years, comes the same certificate of approval. My last report contained evidence of eight years successful experience in Illinois, and showed that Kansas had approved the plan by adopting it in hundreds of her districts, and that even California responded to Maine in commending this solution of the vexed question.

I reprint, with slight alteration, the final paragraph of the chapter on this subject in my last report:

"Free text-books are already to be found in many districts and towns of this State, and are giving great satisfaction. They will yet prevail. The saving of nearly one-half the original cost, the removal of the last exception to the absolute freedom of the schools, the economical use of books by successive classes, the less frequent changes when School Boards have the responsibility of purchasing and caring for public property, instead of merely dictating what others shall purchase and care for, the absolute uniformity secured to the extent that is really essential, in districts and townships, and the full and prompt equipment of the schools with books at the beginning of the term, these (and other) great and manifest advantages will yet make free text-books everywhere the adjunct of free schools. In this belief we were supported by the formal approval of the State Convention of local Superintendents last winter. We are supported by the most intelligent teachers of the State, by several of the ablest and most experienced Superintendents of Public Instruction in the Eastern States, by educational writers there, including the editor of the educational department of the *Atlantic Monthly*, by successful trial there, and, most of all, by the plain teachings of political economy."

[APPENDIX F.]

TABLE No. 1.

Census statistics for the school years ending June 30th, 1876 and 1877.

COUNTIES.	NUMBER OF WHITE CHILDREN BETWEEN FIVE AND SEVENTEEN YEARS OF AGE.					
	1876.			1877.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Alameda	5,477	5,510	10,987	6,224	6,206	12,430
Alpine	43	42	85	60	50	110
Amador	1,272	1,173	2,445	1,339	1,242	2,571
Butte	1,795	1,714	3,509	1,959	1,778	3,737
Calaveras	1,081	1,033	2,114	1,048	1,059	2,107
Colusa	1,243	1,150	2,393	1,347	1,316	2,663
Contra Costa	1,622	1,568	3,190	1,662	1,645	3,307
Del Norte	207	191	398	210	203	413
El Dorado	1,160	1,173	2,333	1,206	1,163	2,369
Fresno	808	721	1,529	957	895	1,852
Humboldt	1,618	1,569	3,187	1,761	1,735	3,496
Inyo	174	185	359	238	250	488
Kern	584	507	1,091	568	549	1,117
Lake	719	758	1,477	802	850	1,652
Lassen	323	309	632	360	366	726
Los Angeles	4,785	4,454	9,239	5,211	5,026	10,237
Marin	982	783	1,765	1,034	839	1,873
Mariposa	425	416	841	469	456	925
Mendocino	1,435	1,393	2,828	1,593	1,527	3,120
Merced	589	571	1,160	580	527	1,107
Modoc	391	384	775	470	445	915
Mono	80	44	124	101	65	166
Monterey	1,693	1,594	3,287	1,757	1,675	3,432
Napa	1,435	1,459	2,894	1,559	1,518	3,077
Nevada	2,340	2,360	4,700	2,508	2,514	5,022
Placer	1,299	1,243	2,542	1,422	1,374	2,796
Plumas	434	410	844	531	482	1,013
Sacramento	3,229	3,207	6,436	3,475	3,393	6,868
San Benito	825	694	1,519	787	697	1,484
San Bernardino	1,132	939	2,071	1,145	1,052	2,197
San Diego	815	775	1,590	828	813	1,641
San Francisco	22,785	23,239	46,024	26,286	26,662	52,948
San Joaquin	2,535	2,595	5,130	2,531	2,635	5,166
San Luis Obispo	1,218	1,044	2,262	1,322	1,239	2,561
San Mateo	1,330	1,171	2,501	1,367	1,154	2,521
Santa Barbara	1,391	1,308	2,699	1,411	1,348	2,759
Santa Clara	4,424	4,407	8,831	4,602	4,507	9,111
Santa Cruz	1,723	1,620	3,343	1,935	1,738	3,673
Shasta	783	710	1,493	825	754	1,579
Sierra	548	551	1,099	562	564	1,126
Siskiyou	829	843	1,672	870	879	1,749
Solano	2,313	2,141	4,454	2,346	2,208	4,554
Sonoma	3,659	3,611	7,300	3,804	3,695	7,499
Stanislaus	993	935	1,928	893	871	1,764
Sutter	775	793	1,568	769	790	1,559
Tehama	788	777	1,565	932	893	1,825
Trinity	324	299	623	326	310	636
Tulare	1,593	1,496	3,089	1,705	1,628	3,333
Tuolumne	944	861	1,805	903	856	1,759
Ventura	676	645	1,321	700	659	1,359
Yolo	1,393	1,453	2,846	1,490	1,531	3,021
Yuba	1,361	1,272	2,633	1,196	1,185	2,381
Totals	92,430	90,100	182,530	98,976	97,816	196,792

TABLE No. 1—Continued.

COUNTIES.	NUMBER OF NEGRO CHILDREN BETWEEN FIVE AND SEVENTEEN YEARS OF AGE.				NUMBER OF INDIAN CHILDREN BETWEEN FIVE AND SEVENTEEN YEARS OF AGE.				
	1876.			1877.	1876.			1877.	
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Alameda	39	48	87	40	56	96	4	9	13
Alpine	9	14	23	9	8	17	2	3	5
Amador	15	20	35	13	15	28	29	10	39
Butte	2		2	2	3	5	6	1	7
Calaveras	8	11	19	11	6	17	9	6	15
Colusa	3	2	5	4	8	12	1	3	4
Contra Costa	2	2	4	2	2	4	24	12	36
Del Norte	17	11	28	14	15	29	23	21	44
El Dorado	7	3	10	6	2	8	19	11	30
Fresno	2	2	4	1	4	5	33	42	75
Humboldt	2	1	3	4	3	7	1	1	1
Inyo	2	2	4	2	2	4			
Kern	2	2	4	2	2	4			
Lake	2		2	2	1	3	9	8	17
Lassen							1	2	3
Los Angeles	30	24	54	17	17	34	11	15	26
Marin	2	2	4	6	3	9	4	1	5
Mariposa	8	12	20	13	15	28	28	15	43
Mendocino	3		3	3		3	113	81	194
Merced	9	4	13	9	8	17		3	3
Modoc				2		2	1	1	2
Mono							1	2	1
Monterey	5	5	10	5	3	8	2	2	4
Napa	11	10	21	18	10	28	2	3	5
Nevada	19	19	38	22	18	40	2	2	4
Placer	3	4	7	3	5	8			

Plumas	39	38	77	43	41	13	6	19	6	4	10
Sacramento	1	1	1	43	41	84	3	3	4	4	8
San Benito	2	4	6	2	3	5	5	13	4	1	1
San Bernardino	6	8	14	4	9	13	13	27	15	14	29
San Diego	114	86	200	132	118	250	1	63	17	22	39
San Francisco	39	26	65	45	25	70	1	14	3	9	12
San Joaquin							3	1	1	1	1
San Louis Obispo							5	8			
San Mateo							1	1			
Santa Barbara	3	3	6	3	2	5	1	1	3	2	5
Santa Clara	25	33	58	27	31	58	6	14	4	4	8
Santa Cruz	17	15	32	17	14	31	2	3	10	10	20
Shasta	7	3	10	6	4	10	61	114	56	43	99
Sierra	4	3	7	6	3	9					
Siskiyou	13	10	23	18	11	29	41	75	35	35	70
Solano	12	11	23	8	6	14	7	11	4	4	8
Sonoma	5	5	10	4	10	14	34	73	33	35	68
Sonoma	6	3	9	2	2	4		2	2	2	2
Stanislaus								5			
Sutter	22	4	4	8	2	10	1	4		2	2
Tehama	2	27	49	28	22	50	5	7	4	5	9
Trinity	2	1	3	2	1	3	28	13	26	16	42
Tulare	24	14	38	11	8	19	5	7	2	2	2
Tuolumne	8	9	17	10	5	15		3	4	2	6
Ventura							1	3	5	7	12
Yolo	11	10	21	11	9	20	5	7	4	1	5
Yuba	37	38	75	38	38	76	3	10	3	5	8
Totals	595	547	1,142	631	568	1,199	606	1,115	561	489	1,050

TABLE No. 1--Continued.

COUNTIES.	TOTAL NUMBER OF CENSUS CHILDREN BETWEEN FIVE AND SEVENTEEN YEARS OF AGE.					NUMBER OF CHILDREN UNDER FIVE YEARS OF AGE IN EIGHTEEN HUNDRED AND SEVENTY-SIX.					NUMBER OF CHILDREN UNDER FIVE YEARS OF AGE IN EIGHTEEN HUNDRED AND SEVENTY-SEVEN.				
	1876	1877	White	Negro	Indian	Total	White	Negro	Indian	Total	White	Negro	Indian	Total	
Alameda	11,087	12,544	5,369	47	10	5,426	6,138	40	2	6,180	6,138	40	2	6,180	
Alpine	85	110	55	---	---	55	78	---	---	78	78	---	---	78	
Amador	2,473	2,589	1,058	6	2	1,066	846	10	---	856	846	10	---	856	
Butte	3,583	3,826	1,326	3	---	1,329	1,469	8	14	1,491	1,469	8	14	1,491	
Calaveras	2,123	2,115	683	---	1	684	685	---	---	687	685	---	---	687	
Colusa	2,427	2,700	1,223	---	2	1,225	1,270	7	---	1,277	1,270	7	---	1,277	
Contra Costa	3,199	3,326	1,320	3	---	1,323	1,299	---	---	1,299	1,299	---	---	1,299	
Del Norte	438	448	167	---	9	176	158	---	10	168	158	---	10	168	
El Dorado	2,408	2,434	826	11	12	849	821	11	6	838	821	11	6	838	
Fresno	1,569	1,889	738	9	4	751	893	6	2	901	893	6	2	901	
Humboldt	3,266	3,564	1,640	3	16	1,659	1,769	2	14	1,785	1,769	2	14	1,785	
Inyo	361	496	223	---	---	223	237	2	---	239	237	2	---	239	
Kern	1,095	1,121	533	1	---	534	562	1	2	565	562	1	2	565	
Lake	1,496	1,661	744	---	1	745	713	1	2	716	713	1	2	716	
Lassen	635	727	323	---	---	323	348	---	---	348	348	---	---	348	
Los Angeles	9,319	10,287	3,227	8	---	3,235	5,875	13	10	5,898	5,875	13	10	5,898	
Marin	1,774	1,891	839	2	---	841	842	1	2	845	842	1	2	845	
Mariposa	904	1,000	324	10	16	350	333	8	1	342	333	8	1	342	
Mendocino	3,025	3,318	1,471	3	32	1,506	1,562	6	39	1,607	1,562	6	39	1,607	
Merced	1,176	1,127	564	3	6	573	518	5	---	523	518	5	---	523	
Modoc	777	921	362	---	---	362	379	---	---	379	379	---	---	379	
Mono	125	166	74	---	---	74	95	---	---	95	95	---	---	95	
Monterey	3,301	3,446	1,335	1	1	1,337	1,383	---	11	1,394	1,383	---	11	1,394	
Napa	2,920	3,116	1,329	11	2	1,342	1,355	9	1	1,365	1,355	9	1	1,365	
Nevada	4,742	5,068	1,799	14	---	1,813	1,792	12	---	1,804	1,792	12	---	1,804	
Placer	2,546	2,805	1,090	3	---	1,093	1,174	2	---	1,176	1,174	2	---	1,176	
Plumas	863	1,023	422	---	5	427	424	---	2	426	424	---	2	426	

Sacramento	6,519	6,950	2,750	36	1	2,787	2,860	43	1	2,904
San Benito	1,523	1,485	753	---	11	764	692	---	---	692
San Bernardino	2,104	2,231	867	2	2	871	929	3	4	929
San Diego	1,667	1,693	708	3	54	765	739	5	2	746
San Francisco	46,238	53,210	23,978	104	1	24,083	24,953	108	---	24,953
San Joaquin	5,196	5,237	2,079	22	---	2,104	2,105	26	---	2,131
San Luis Obispo	2,270	2,561	1,126	---	---	1,126	1,132	1	4	1,137
San Mateo	2,502	2,521	1,164	1	---	1,167	1,065	---	---	1,065
Santa Barbara	2,706	2,769	1,151	2	12	1,165	1,261	---	4	1,270
Santa Clara	8,903	9,177	3,670	25	3	3,698	3,590	24	6	3,620
Santa Cruz	3,378	3,724	1,425	2	---	1,427	1,473	4	4	1,481
Shasta	1,617	1,688	582	1	26	609	614	2	25	661
Sierra	1,106	1,135	505	---	---	505	546	2	---	548
Siskiyou	1,770	1,848	682	4	28	714	682	4	33	719
Solano	4,488	4,576	2,124	8	2	2,134	2,061	5	2	2,068
Sonoma	7,383	7,581	3,076	2	17	3,095	3,139	1	14	3,154
Stanislaus	1,937	1,770	769	5	---	774	762	2	2	766
Sutter	1,577	1,571	672	4	---	676	666	5	---	671
Tehama	1,626	1,884	674	6	---	685	746	14	---	762
Trinity	667	681	268	---	5	273	295	---	7	302
Tulare	3,134	3,354	1,435	3	1	1,439	1,551	10	1	1,562
Tuolumne	1,825	1,798	515	1	---	516	510	2	---	512
Ventura	1,324	1,371	720	---	---	720	725	---	9	734
Yolo	2,879	3,046	1,389	2	---	1,391	1,344	---	---	1,344
Yuba	2,721	2,465	788	10	1	799	943	14	1	958
Totals	184,787	200,067	82,924	381	290	83,603	88,286	424	241	88,951

TABLE No. 1—Continued.

Number of children between five and seventeen years of age who have attended Public Schools at any time during the school year of 1876.

COUNTIES.	White.	Negro.	Indian.	Total.
Alameda	7,609	52	6	7,667
Alpine	78	—	—	78
Amador	1,927	9	1	1,937
Butte	2,909	18	7	2,934
Calaveras	1,605	—	2	1,607
Colusa	1,749	13	6	1,768
Contra Costa	2,347	—	—	2,347
Del Norte	305	—	—	305
El Dorado	1,878	23	27	1,928
Fresno	969	—	4	973
Humboldt	2,265	3	40	2,308
Inyo	282	—	—	282
Kern	658	2	—	660
Lake	1,133	—	1	1,134
Lassen	461	—	2	463
Los Angeles	5,308	19	3	5,330
Marin	1,174	—	1	1,175
Mariposa	614	27	—	641
Mendocino	2,181	2	79	2,262
Merced	886	8	10	904
Modoc	555	—	—	555
Mono	99	—	—	99
Monterey	2,146	4	4	2,154
Napa	2,110	16	—	2,126
Nevada	3,695	26	—	3,721
Placer	2,140	4	—	2,144
Plumas	642	—	—	642
Sacramento	4,334	59	1	4,394
San Benito	1,007	—	6	1,013
San Bernardino	1,480	4	1	1,485
San Diego	861	—	7	868
San Francisco	28,499	155	—	28,654
San Joaquin	4,216	41	—	4,257
San Luis Obispo	1,438	—	—	1,438
San Mateo	1,614	—	1	1,615
Santa Barbara	1,392	1	3	1,396
Santa Clara	5,346	31	1	5,378
Santa Cruz	2,272	29	1	2,302
Shasta	1,201	6	26	1,233
Sierra	940	5	—	945
Siskiyou	1,315	20	17	1,352
Solano	3,165	15	1	3,181
Sonoma	5,399	5	3	5,407
Stanislaus	1,584	4	—	1,588
Sutter	1,322	—	1	1,323
Tehama	1,123	34	—	1,157
Trinity	438	2	13	453
Tulare	2,242	31	—	2,273
Tuolumne	1,491	12	2	1,505
Ventura	792	—	—	792
Yolo	2,129	9	1	2,139
Yuba	1,878	55	5	1,938
Totals	125,193	744	283	126,220

TABLE No. 1—Continued.

Number of children between five and seventeen years of age who have attended Public Schools at any time during the school year of 1877.

COUNTIES.	White.	Negro.	Indian.	Total.
Alameda	8,692	64	1	8,757
Alpine	85			85
Amador	1,929	8		1,937
Butte	2,859	22	25	2,906
Calaveras	1,515			1,515
Colusa	1,885	16	2	1,903
Contra Costa	2,490			2,490
Del Norte	339		13	352
El Dorado	1,863	21	20	1,904
Fresno	1,180		10	1,190
Humboldt	2,503	3	10	2,516
Inyo	341	2		343
Kern	758	4		762
Lake	1,299		1	1,300
Lassen	520			520
Los Angeles	5,875	13	10	5,898
Marin	1,199	3		1,202
Mariposa	677	13	29	709
Mendocino	2,474		89	2,563
Merced	867	13		880
Modoc	640	1		641
Mono	123			123
Monterey	2,280	3	6	2,289
Napa	2,295	22	3	2,320
Nevada	3,836	31	1	3,868
Placer	2,157	4		2,161
Plumas	824		6	830
Sacramento	4,621	63		4,684
San Benito	960			960
San Bernardino	1,442	3	3	1,448
San Diego	912	6	1	919
San Francisco	31,523	146		31,669
San Joaquin	4,313	34	1	4,348
San Luis Obispo	1,557			1,557
San Mateo	1,694			1,694
Santa Barbara	1,527	2	2	1,531
Santa Clara	5,681	24	2	5,707
Santa Cruz	2,547	25	4	2,576
Shasta	1,263	1	20	1,284
Sierra	972	7		979
Siskiyou	1,328	18	9	1,355
Solano	3,246	16	1	3,263
Sonoma	5,768	7	6	5,781
Stanislaus	1,450			1,450
Sutter	1,252	8	1	1,261
Tehama	1,306	43		1,349
Trinity	458	2	10	470
Tulare	2,482	13		2,495
Tuolumne	1,450	14		1,464
Ventura	873		5	878
Yolo	2,329	11	1	2,341
Yuba	1,797	70	4	1,871
Totals	134,306	735	294	135,335

TABLE NO. 1—Continued.

Number of children between five and seventeen years of age who have attended only private schools at any time during the school year of 1876.

COUNTIES.	White.	Negro.	Indian.	Total.
Alameda	722			722
Alpine	6			6
Amador	136	11		147
Butte	111			111
Calaveras	63	2		65
Colusa	114			114
Contra Costa	188		2	190
Del Norte	19		3	22
El Dorado	66			66
Fresno	50	1	1	52
Humboldt	115			115
Inyo	26			26
Kern	33			33
Lake	41	1		42
Lassen	11		1	12
Los Angeles	829	3	4	836
Marin	218	1	1	220
Mariposa	15		1	16
Mendocino	18		1	19
Merced	27		1	28
Modoc	4			4
Mono	3			3
Monterey	138			138
Napa	242			242
Nevada	349		7	356
Placer	24	1		25
Plumas	17			17
Sacramento	774	2		776
San Benito	108			108
San Bernardino	71		2	73
San Diego	111		1	112
San Francisco	6,642	4	9	6,665
San Joaquin	134	3	1	138
San Luis Obispo	83	1	1	85
San Mateo	302			302
Santa Barbara	733			733
Santa Clara	1,084			1,084
Santa Cruz	257			257
Shasta	5			5
Sierra	10			10
Siskiyou	22			22
Solano	461			461
Sonoma	407	4	2	413
Stanislaus	4			4
Sutter	15	2		17
Tehama	54			54
Trinity	16			16
Tulare	65			65
Tuolumne	32			32
Ventura	82			82
Yolo	153			153
Yuba	338	3		341
Totals	14,548	39	38	14,625

TABLE No. 1—Continued.

Number of children between five and seventeen years of age who have attended only private schools at any time during the school year of 1877.

COUNTIES.	White.	Negro.	Indian.	Total.
Alameda	921		1	923
Alpine				
Amador	72			72
Butte	130		7	137
Calaveras	22			22
Colusa	175			175
Contra Costa	154			154
Del Norte	12			12
El Dorado	59			59
Fresno	60			60
Humboldt	240	1	1	242
Inyo	4			4
Kern	18			18
Lake	41		1	42
Lassen	1			1
Los Angeles	579			579
Marin	260	1	2	263
Mariposa	12			12
Mendocino	45			45
Merced	12			12
Modoc	10			10
Mono	7			7
Monterey	81			81
Napa	207			207
Nevada	311			311
Placer	34			34
Plumas	14			14
Sacramento	931		4	935
San Benito	105			105
San Bernardino	90	1		91
San Diego	99	1	1	101
San Francisco	6,975	2	7	6,984
San Joaquin	140	3		143
San Luis Obispo	89			89
San Mateo	238			238
Santa Barbara	314		2	316
Santa Clara	1,220			1,220
Santa Cruz	257		1	258
Shasta	17		3	20
Sierra	11			11
Siskiyou	46			46
Solano	464			464
Sonoma	257	1	1	259
Stanislaus	10			10
Sutter	26			26
Tehama	64			64
Trinity	14			14
Tulare	45			45
Tuolumne	31			31
Ventura	68			68
Yolo	84			84
Yuba	226			226
Totals	15,303	10	31	15,344

TABLE NO. 1—Continued.

Number of children between five and seventeen years of age who have not attended school at any time during the school year of 1876.

COUNTIES.	White.	Negro.	Indian.	Total.
Alameda	2,637	29	12	2,698
Alpine	4			4
Amador	383	2	4	389
Butte	679	17	32	728
Calaveras	446		5	451
Colusa	500	6	9	515
Contra Costa	657	5		662
Del Norte	76	4	23	103
El Dorado	388	5	21	414
Fresno	511	9	25	545
Humboldt	808	1	34	843
Inyo	51	1	1	53
Kern	400	2		402
Lake	303	1	16	320
Lassen	160			160
Los Angeles	3,101	32	19	3,152
Marin	367	3	3	373
Mariposa	210	5	28	243
Mendocino	629	1	114	744
Mereed	234	4	7	245
Modoc	159		1	160
Mono	22		1	23
Monterey	1,005	6		1,011
Napa	542	5	5	552
Nevada	669	7	19	695
Placer	378	3		381
Plumas	186		18	204
Sacramento	1,324	17	2	1,343
San Benito	404	1	7	412
San Bernardino	520	2	24	546
San Diego	613	13	56	682
San Francisco	10,883	61	5	10,949
San Joaquin	794	10	1	805
San Luis Obispo	732		7	739
San Mateo	583		2	585
Santa Barbara	543	5	29	577
Santa Clara	2,401	27	13	2,441
Santa Cruz	814	3	2	819
Shasta	292	3	84	379
Sierra	149	2		151
Siskiyou	335	3	58	396
Solano	836	4	6	846
Sonoma	1,497	3	63	1,563
Stanislaus	342	3		345
Sutter	231	3	3	237
Tehama	388	15	12	415
Trinity	169	1	28	198
Tulare	743	7	7	757
Tuolumne	282	5	2	289
Ventura	450			450
Yolo	564	12	11	587
Yuba	417	17	8	442
Totals	41,831	365	827	43,033

TABLE No. 1—Continued.

Number of children between five and seventeen years of age who have not attended school at any time during the school year of 1877.

COUNTIES.	White.	Negro.	Indian.	Total.
Alameda	2,819	24	16	2,859
Alpine	25			25
Amador	570	8	1	579
Butte	748	5	29	782
Calaveras	570	5	3	578
Colusa	603	1	18	622
Contra Costa	663	12	7	682
Del Norte	62	4	18	84
El Dorado	449	7	15	471
Fresno	612	8	19	639
Humboldt	780	1	25	806
Inyo	143	5	1	149
Kern	340	1		341
Lake	315	1	3	319
Lassen	205		1	206
Los Angeles	3,783	21	15	3,819
Marin	415	1	6	422
Mariposa	252	6	21	279
Mendocino	605	1	104	710
Merced	230	4		234
Modoc	176			176
Mono	36			36
Monterey	1,071	2	3	1,076
Napa	573	6	10	589
Nevada	881	6	2	889
Placer	559	4		563
Plumas	173		6	179
Sacramento	1,316	21	4	1,341
San Benito	419			419
San Bernardino	665	1	26	692
San Diego	633	6	34	673
San Francisco	14,450	102	5	14,557
San Joaquin	728	18		746
San Luis Obispo	911			911
San Mateo	589			589
Santa Barbara	903	4	15	922
Santa Clara	2,220	23	7	2,250
Santa Cruz	869	6	15	890
Shasta	319	1	64	384
Sierra	143	2		145
Siskiyou	375	11	61	447
Solano	840	3	6	849
Sonoma	1,479	5	57	1,541
Stanislaus	304	4	2	310
Sutter	281	2	1	284
Tehama	455	7	9	471
Trinity	164	1	32	197
Tulare	796	6	2	804
Tuolumne	278	1	6	285
Ventura	421		4	425
Yolo	612	6	3	621
Yuba	357	7	4	368
Totals	47,985	370	680	49,035

TABLE No. 1—Continued.

COUNTIES.	NUMBER OF MONGOLIAN CHILDREN UNDER SEVENTEEN YEARS OF AGE.		NUMBER OF MONGOLIAN CHILDREN BETWEEN FIVE AND SEVENTEEN YEARS OF AGE, ATTENDING SCHOOL.		NUMBER OF DEAF AND DUMB CHILDREN BETWEEN FIVE AND TWENTY-ONE YEARS OF AGE.		NUMBER OF BLIND CHILDREN BETWEEN FIVE AND TWENTY-ONE YEARS OF AGE.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	412	277	212	158	3	6	5	8
Alpine	12	15	1	1				
Amador	16	17	10	1				
Butte	12	15			2	1		
Calaveras	11	67						
Colusa	5							
Contra Costa								
Del Norte							1	
El Dorado	12	34	28	7				
Fresno	3	7				1		
Humboldt	7	7	1		2	4		
Inyo	2	3	1	1				
Kern	8	8	1				1	1
Lake					1	1		
Lassen					1			
Los Angeles	1	17	19	4	1	4		1
Marin	4	1		1			1	
Mariposa	6	2			1	1		
Mendocino	7	6		2				2
Merced	10	15	1	14			1	
Modoc								
Mono								
Monterey	36	17	7	1	1	1	1	
Napa	13	46	2		2	1		
Nevada	14	17		1		1		2
Placer	25	19						1
Plumas	13	5			1	1		
Sacramento	73	81	1	3		2		
San Benito					2		1	

TABLE No. 1—Continued.
Nativity of Children.

COUNTIES.	1876.				1877.			
	Native Born, Native Parents-----	Native Born, one Parent Foreign-----	Native Born, both Parents Foreign-----	Foreign Born-----	Native Born, Native Parents-----	Native Born, one Parent Foreign-----	Native Born, both Parents Foreign-----	Foreign Born-----
Alameda-----	7,223	1,436	7,127	595	7,660	2,001	8,565	775
Alpine-----	66	33	35	3	97	47	36	8
Amador-----	1,829	427	1,180	116	1,702	507	1,889	48
Butte-----	3,602	469	793	38	3,797	673	844	19
Calaveras-----	1,157	272	1,340	52	1,159	401	1,233	25
Colusa-----	3,076	211	272	56	3,379	252	314	99
Contra Costa-----	1,731	623	2,072	101	1,765	640	2,092	124
Del Norte-----	393	95	121	5	403	82	125	8
El Dorado-----	1,631	574	1,077	15	1,634	619	1,034	19
Fresno-----	1,354	122	66	30	1,923	331	414	122
Humboldt-----	3,048	529	1,104	184	3,268	589	1,553	241
Inyo-----	341	54	191	1	442	53	224	20
Kern-----	1,298	194	135	11	1,402	72	201	15
Lake-----	1,886	136	193	26	2,011	151	290	15
Lassen-----	743	101	111	3	859	139	77	
Los Angeles-----	8,908	1,778	1,587	302	10,226	1,233	2,316	143
Marin-----	1,047	241	1,241	90	1,056	239	1,380	59
Mariposa-----	517	216	457	21	654	174	493	17
Mendocino-----	3,564	261	599	115	3,724	405	652	153
Merced-----	1,225	183	328	23	1,096	192	229	47
Modoc-----	548	17	43	16	421	53	24	8
Mono-----	161	14	22	2	203	10	43	5

Monterey	3,119	463	1,003	89	3,077	589	1,094	97
Napa	2,666	363	1,145	88	2,641	473	1,277	137
Nevada	2,262	848	2,856	186	2,361	987	3,272	222
Placer	1,737	513	1,320	79	1,902	383	1,392	107
Plumas	838	137	301	16	944	166	313	31
Sacramento	4,109	1,354	3,046	147	4,238	1,545	3,810	267
San Benito	274	274	439	48	1,511	221	410	34
San Bernardino	2,336	246	371	24	2,504	267	380	11
San Diego	1,570	263	385	64	1,697	244	448	50
San Francisco	15,274	7,034	45,922	3,207	16,099	7,811	52,570	3,765
San Joaquin	4,564	886	1,799	48	4,753	819	1,754	71
San Luis Obispo	2,366	439	303	68	2,844	5,092	299	46
San Mateo	1,525	439	1,582	91	1,224	465	1,749	152
Santa Barbara	2,300	296	247	27	3,036	472	366	41
Santa Clara	6,546	1,420	4,292	515	6,776	1,433	4,398	324
Santa Cruz	2,734	390	1,440	42	3,065	648	1,435	60
Shasta	1,726	154	296	57	1,839	184	281	26
Sierra	366	127	356	127	460	128	406	15
Siskiyou	1,458	325	709	9	1,533	364	665	5
Solano	2,932	1,155	2,043	506	3,040	807	2,593	158
Sonoma	6,880	1,014	2,366	218	7,072	1,060	2,127	476
Stanislaus	1,959	266	475	11	*	*	*	*
Sutter	1,650	197	374	32	1,593	199	416	34
Tehama	1,367	139	201	6	2,185	173	286	2
Trinity	434	160	342	16	494	148	338	22
Tulare	4,104	215	245	33	4,267	350	264	38
Tuolumne	715	379	1,202	37	771	336	1,129	84
Ventura	1,515	254	267	8	*	*	*	*
Yolo	3,062	257	883	88	2,967	404	922	102
Yuba	1,853	326	1,325	31	1,712	515	1,167	50
Totals	130,751	28,449	98,499	7,723	135,506	34,405	108,699	8,397

* Not reported.

TABLE NO. 2.

School Statistics.

COUNTIES.	WHOLE NUMBER OF BOYS ENROLLED.		WHOLE NUMBER OF GIRLS ENROLLED.		TOTAL NUMBER ENROLLED.	
	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	4,140	4,178	3,629	4,023	7,769	8,201
Alpine	39	43	37	39	76	82
Anamor	1,074	987	965	891	2,039	1,878
Butte	1,589	1,631	1,415	1,503	3,004	3,134
Calaveras	825	845	792	832	1,617	1,697
Colusa	998	1,009	847	868	1,845	1,877
Contra Costa	1,301	1,373	1,214	1,279	2,515	2,652
Del Norte	198	186	177	183	375	369
El Dorado	1,048	1,011	961	918	2,009	1,929
Fresno	595	634	512	587	1,105	1,221
Humboldt	1,394	1,501	1,214	1,451	2,608	2,952
Inyo	165	202	174	181	339	383
Kern	355	380	336	382	691	762
Lake	628	711	675	712	1,303	1,423
Lassen	235	266	253	262	488	528
Los Angeles	2,963	3,261	2,506	2,942	5,469	6,203
Marin	643	658	606	620	1,249	1,278
Mariposa	286	356	300	353	586	709
Mendocino	1,231	1,412	1,152	1,377	2,383	2,789
Merced	504	594	517	522	1,021	1,116
Modoc	350	359	311	308	661	667
Mono	65	68	41	38	106	106
Monterey	1,220	1,247	1,130	1,093	2,350	2,340
Napa	1,278	1,335	1,172	1,237	2,450	2,572
Nevada	1,924	2,022	1,805	1,830	3,749	3,852
Placer	1,175	1,163	1,054	1,101	2,229	2,264
Plumas	394	457	389	404	783	861

Sacramento	2,707	2,708	2,447	2,624	5,154	5,332
San Benito	644	627	526	576	1,170	1,173
San Bernardino	858	854	712	751	1,370	1,605
San Diego	485	548	441	507	926	1,055
San Francisco	17,995	19,941	16,034	17,347	34,029	37,286
San Joaquin	2,677	2,653	2,666	2,652	5,343	5,305
San Luis Obispo	841	786	661	760	1,502	1,546
San Mateo	879	932	775	801	1,654	1,733
Santa Barbara	892	1,001	652	791	1,544	1,792
Santa Clara	3,426	3,363	2,976	3,000	6,402	6,363
Santa Cruz	1,317	1,322	1,158	1,327	2,475	2,849
Shasta	646	672	555	594	1,201	1,266
Sierra	486	556	530	534	1,016	1,090
Siskiyou	720	713	676	669	1,396	1,382
Solano	2,027	1,989	1,550	1,608	3,577	3,597
Sonoma	3,256	3,309	3,961	3,015	6,217	6,324
Stanislaus	870	792	801	775	1,671	1,567
Sutter	715	690	714	683	1,429	1,373
Tehama	531	702	542	684	1,073	1,386
Trinity	243	241	217	234	460	475
Tulare	1,191	1,333	1,095	1,191	2,286	2,524
Tuolumne	654	746	590	760	1,244	1,506
Ventura	527	424	482	400	1,009	824
Yolo	1,195	1,216	1,100	1,267	2,295	2,483
Yuba	1,091	1,142	933	1,008	2,024	2,150
Totals	73,490	77,349	66,978	70,514	140,468	147,863

TABLE No. 2—Continued.

COUNTIES.	AVERAGE NUMBER BELONGING.		AVERAGE DAILY ATTENDANCE.		PERCENTAGE OF ATTENDANCE ON AVERAGE NUMBER BELONGING.	
	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	5,825	6,475	5,461	6,078	.92	.94
Alpine	56	55	47	48	.84	.87
Amador	1,445	1,299	1,288	1,174	.89	.90
Butte	2,041	2,020	1,802	1,776	.88	.88
Calaveras	1,134	1,182	991	1,029	.87	.87
Colusa	1,240	1,247	1,106	1,090	.89	.87
Contra Costa	1,664	1,795	1,455	1,530	.87	.85
Del Norte	270	259	238	237	.88	.91
El Dorado	1,354	1,311	1,186	1,177	.87 $\frac{1}{2}$	.89
Fresno	679	804	601	729	.88 $\frac{1}{2}$	.90
Humboldt	1,603	1,799	1,420	1,499	.88 $\frac{1}{2}$	.83
Inyo	217	228	188	208	.87	.91
Kern	384	467	340	410	.89	.88
Lake	715	825	639	732	.89	.89
Lassen	321	332	287	292	.89	.88
Los Angeles	3,016	3,419	2,672	3,315	.88 $\frac{1}{2}$	.96
Marin	815	819	739	711	.89	.87
Mariposa	436	494	382	449	.88	.91
Mendocino	1,424	1,661	1,321	1,493	.93	.90
Merced	604	655	526	597	.87	.91
Modoc	477	459	420	400	.88	.87
Mono	74	72	63	57	.85	.79
Monterey	1,304	1,470	1,166	1,259	-----	.85
Napa	1,464	1,522	1,326	1,372	.90 $\frac{1}{2}$	.90
Nevada	2,624	2,859	2,311	2,453	.88	.86
Placer	1,490	1,516	1,264	1,297	.85	.85
Plumas	499	571	438	508	.88	.89
Sacramento	3,330	3,340	2,899	3,078	.87	.95
San Benito	701	690	626	615	.89	.90
San Bernardino	883	885	752	777	.88	.88
San Diego	537	623	496	568	.92	.91
San Francisco	24,150	25,884	22,762	24,899	.94	.96

San Joaquin	2,987	3,084	2,740	2,950	.92	.95
San Luis Obispo	840	935	730	851	.87	.91
San Mateo	985	1,095	887	980	.90	.89
Santa Barbara	850	973	746	869	.88	.89
Santa Clara	3,971	4,140	3,653	3,858	.92	.93
Santa Cruz	1,596	1,755	1,425	1,627	.89	.93
Shasta	783	794	673	697	.86	.88
Sierra	727	713	646	624	.89	.88
Siskiyou	1,029	1,018	934	913	.91	.90
Solano	2,536	2,546	2,298	2,327	.91	.91
Sonoma	3,888	4,023	3,514	3,611	.88	.89
Stanislaus	1,098	1,003	987	906	.90	.90
Sutter	939	925	805	808	.86	.87
Tehama	747	842	669	758	.89 $\frac{1}{2}$	.90
Trinity	358	364	326	331	.91	.91
Tulare	1,440	1,599	1,240	1,400	.87	.87
Tuolumne	1,074	1,083	940	969	.87 $\frac{1}{2}$	.89
Ventura	498	543	451	492	.90 $\frac{1}{2}$	.91
Yolo	1,510	1,666	1,354	1,510	.90	.90
Yuba	1,323	1,389	1,171	1,202	.88 $\frac{1}{2}$	.86
Totals	91,748	97,527	83,391	89,539	.89	.91

TABLE No. 2—Continued.
Classification of Public School Pupils.

COUNTIES.	1876.									
	High School	FIRST GRADE.		SECOND GRADE.		THIRD GRADE.				Total
		First Division	Second Division	First Division	Second Division	First Division	Second Division	Third Division	Fourth Division	
Alameda	310	426	623	759	855	1,073	1,154	1,179	1,390	7,769
Alpine		3		62	15	8	225	293	14	88
Amador	160	129	151	261	269	268	310	246	245	2,039
Butte	96	198	250	414	445	197	533	467	436	3,006
Calaveras	33	92	148	232	292	245	228	159	188	1,617
Colusa	24	89	160	244	274	283	230	201	226	1,845
Contra Costa	56	151	252	355	355	374	313	354	342	2,432
Del Norte	12	42	36	34	48	42	45	39	77	375
El Dorado	63	132	250	243	270	267	314	242	228	2,009
Fresno	12	63	88	166	187	110	174	167	138	1,105
Humboldt	54	164	248	230	413	410	421	345	323	2,608
Inyo		30	41	49	42	26	45	65	41	339
Kern	5	57	62	90	89	2	140	118	128	691
Lake	13	93	126	158	202	200	178	191	142	1,303
Lassen	5	32	49	50	77	37	68	59	113	490
Los Angeles	108	262	332	570	706	623	845	807	1,216	5,469
Marin	4	70	103	209	182	72	207	190	212	1,249
Mariposa	9	12	49	94	112	3	92	92	90	553
Mendocino	75	103	184	357	397	339	316	307	305	2,383
Merced	27	52	84	93	232	181	119	124	109	1,021
Modoc	6	37	9	43	31		23	20	39	549

	5	9	19	10	1	6	4	7	106
Mono	25	107	225	341	383	355	453	377	2,320
Monterey	31	223	256	365	376	356	337	393	2,450
Napa	224	294	584	470	261	674	421	508	3,668
Nevada	43	272	298	341	395	274	261	224	2,221
Placer	26	77	109	117	51	144	123	93	783
Plumas	118	308	519	704	861	720	768	1,017	5,159
Sacramento	23	100	95	192	183	196	166	180	1,170
San Benito	21	109	93	231	266	258	243	251	1,570
San Bernardino	22	114	73	125	24	167	147	174	892
San Diego	756	6,404			10,237		10,238		34,039
San Francisco	382	526	638	764		824	660	1,051	5,343
San Joaquin		65	151	147	206	313	290	295	1,502
San Luis Obispo	30	168	200	212	225	264	260	229	1,654
San Mateo	31	96	188	146	283	255	475		1,544
Santa Barbara	122	445	535	761	808	972	1,004	1,486	6,402
Santa Clara		167	239	298	474	384	339	388	2,475
Santa Cruz	86	106	170	183	125	199	161	158	1,201
Shasta	43		144	121	113	194	167	190	1,016
Sierra		60	187	210	156	258	207	121	1,396
Siskiyou	44	141	417	451	506	481	427	562	3,577
Solano	123	369	678	792	849	941	843	1,096	6,161
Sonoma	202	443	269	273	28	268	245	186	1,662
Stanislaus	81	174	325	274	33	276	212	208	1,479
Sutter	5	54	137	130	80	202	209	154	1,073
Tehama		95	90	83	54	63	66	53	460
Trinity	4	11	190	230	308	268	229	231	1,656
Tulare	5	111	188	247	139	124	135	105	1,197
Tuolumne	36	144							
Ventura		205	297	376	395	336	497		2,295
Yolo	60	190	260	289	316	366	449		2,920
Yuba	25								
Totals	2,240	14,832	12,197	14,391	22,908	12,598	24,311	15,740	131,157

TABLE No. 2—Continued.
Classification of Public School Pupils.

COUNTIES.	1877.									
	High School		FIRST GRADE.		SECOND GRADE.		THIRD GRADE.			
			First Division	Second Division	First Division	Second Division	First Division	Second Division	Third Division	Fourth Division
Alameda	1,570	645	1,223	804	932	1,020	1,038	974	1,195	8,201
Alpine			4	12	14	27	7	12	5	81
Amador	94	95	156	276	227	223	319	254	234	1,878
Butte	97	165	340	473	595	458	392	254	380	3,134
Calaveras	27	97	184	311	236	231	233	185	193	1,697
Colusa	7	96	132	239	232	317	272	254	278	1,827
Contra Costa	36	209	282	315	416	381	309	332	372	2,652
Del Norte		17	35	102	143	8	12	22	30	369
El Dorado	27	116	220	287	286	337	261	225	170	1,929
Fresno	18	44	87	167	239	170	180	777	139	1,221
Humboldt	70	195	270	278	493	401	452	384	334	2,877
Inyo	6	20	25	39	36	45	49	80	83	383
Kern	4	36	48	102	94	102	108	109	155	758
Lake	13	78	168	177	207	243	207	169	179	1,441
Lassen	14	19	19	77	78	101	67	60	93	528
Los Angeles	204	395	417	714	787	935	876	906	1,030	6,164
Marin	22	73	91	178	229	178	186	172	150	1,278
Mariposa	17	124	57	124	132	110	98	70	58	718
Mendocino	72	104	247	399	512	462	352	270	371	2,789
Merced	27	59	95	166	142	143	189	141	163	1,116
Modoc	9	87	50	146	98	111	70	85	27	673

Mono	46	3	14	12	25	11	20	4	9	98
Monterey	46	116	155	227	342	349	431	327	353	2,346
Napa	33	171	237	223	339	398	426	292	453	2,572
Nevada	246	260	361	429	519	574	555	453	434	3,831
Placer	41	130	236	258	334	322	279	268	252	2,140
Plumas	44	48	75	160	123	147	95	87	69	848
Sacramento	121	199	478	495	675	751	755	707	1,151	5,332
San Benito	27	70	100	179	175	196	135	156	135	1,173
San Bernardino	12	51	93	161	214	349	262	226	234	1,605
San Diego	32	42	101	104	156	150	152	150	168	1,055
San Francisco	1,060	7,205	7,205	600	760	10,908	672	10,908	37,286	
San Joaquin	266	353	322	128	164	753	666	666	713	5,305
San Luis Obispo	9	31	70	128	164	251	281	346	266	1,546
San Mateo	40	116	181	190	300	240	229	197	240	1,733
Santa Barbara	50	68	170	150	263	253	240	224	374	1,792
Santa Clara	137	238	418	539	742	870	925	1,107	1,387	6,363
Santa Cruz	120	108	145	311	351	424	453	428	509	2,849
Shasta	54	76	94	216	240	214	134	131	107	1,266
Sierra	---	39	84	94	133	213	191	190	146	1,090
Siskiyou	33	88	97	244	265	213	175	154	113	1,382
Solano	163	186	337	453	487	474	443	492	562	3,597
Sonoma	64	260	572	756	884	1,048	879	804	1,060	6,324
Stanislaus	66	152	188	249	218	238	196	143	117	1,567
Sutter	13	26	31	324	272	261	188	135	123	1,373
Tehama	---	118	180	194	209	180	182	175	148	1,386
Trinity	---	19	27	107	102	75	56	54	35	475
Tulare	73	186	271	355	382	376	385	328	269	2,624
Tuolumne	25	82	122	180	160	236	151	152	133	1,261
Ventura *	---	---	---	---	---	---	---	---	---	---
Yolo	74	131	229	289	385	411	356	265	345	2,485
Yuba	30	112	192	256	320	306	322	335	277	2,150
Totals	3,433	13,176	17,135	13,272	15,688	27,174	14,245	25,039	23,821	152,983

* Not reported.

TABLE No. 2—Continued.

COUNTIES.	TOTAL NUMBER OF SCHOOL DISTRICTS.		NUMBER OF NEW DISTRICTS ORGANIZED.		NUMBER OF FIRST GRADE SCHOOLS.		NUMBER OF SECOND GRADE SCHOOLS.		NUMBER OF THIRD GRADE SCHOOLS.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	43	44	2	1	39	58	40	40	59	57
Alpine	5	5					2	4	3	1
Amador	31	31			9	7	13	26	9	6
Butte	57	61	2	4	16	14	28	40	27	25
Calaveras	35	35	1		21	24	13	11	4	4
Colusa	48	52	2	4	28	24	21	25	4	9
Contra Costa	34	35			29	29	9	9	8	9
Del Norte	8	8			5	1	3	6	2	3
El Dorado	40	40	1		28	16	13	12	3	6
Fresno	36	42	4	7	19	13	14	22	3	3
Humboldt	42	43	3	1	27	29	19	22	9	7
Inyo	10	10	1		6	6	2	1	2	3
Kern	15	18	3	3	6	5	7	8	7	9
Lake	26	28	2	2	18	24	7	7	1	3
Lassen	13	14		1	2	2	9	8	3	15
Los Angeles	53	59	4	5	49	45	33	32	4	27
Marin	28	29	2	1	11	9	13	20	9	5
Mariposa	18	21	1	3	6	12	11	7	1	
Mendocino	51	57	5	6	21	21	27	28	8	15
Merced	24	25	1	1	17	15	10	13	1	2
Modoc	22	21	2	1	5	4	8	14	7	2
Mono	4	4			1	3	3	1		
Monterey	37	39	3	2	8	10	13	12	16	19
Napa	43	46		3	22	23	19	23	13	9
Nevada	42	44		3	29	28	24	24	10	15
Placer	44	44		2	31	29	13	13	8	4
Plumas	25	25	1		16	12	5	9	4	4
Sacramento	57	61	2	3	63	66	29	33	18	19
San Benito	20	21		1	6	7	7	7	7	7
San Bernardino	23	24	2	1	12	8	9	16	6	6
San Diego	29	34	3	1	8	5	16	25	7	3

San Francisco	12	12	1	3	17	13	26	17	14	27
San Joaquin	74	77	4	6	56	48	20	36	23	22
San Luis Obispo	30	36			8	6	10	14	12	16
San Mateo	27	27			21	17	14	14	5	9
Santa Barbara	15	18	3	4	22	18	4	6	1	9
Santa Clara	57	57	4		39	44	25	28	54	52
Santa Cruz	34	35	4	1	11	13	19	18	24	28
Shasta	31	31	1		12	14	17	18	6	3
Sierra	24	24			5	7	14	12	6	16
Siskiyou	34	36		2	14	10	19	25	9	6
Solano	47	46		1	31	31	27	34	22	16
Sonoma	93	95	3	4	50	34	58	53	30	51
Stanislaus	43	45		2	19	20	19	20	5	8
Sutter	36	37		3	6	5	25	30	5	4
Tehama	29	32		3	3	3	9	10	22	32
Trinity	13	13			5	6	4	4	5	5
Tulare	66	68	13	4	17	11	23	50	15	5
Tuolumne	23	26	2	1	8	15	16	17	8	4
Ventura	13	15		2	6	7	7	7	5	5
Yolo	44	45	1	3	33	23	12	26	8	9
Yuba	32	33		1	23	18	9	16	14	14
Totals	1,742	1,828	84	96	964	914	817	983	556	627

TABLE No. 2—Continued.

	TOTAL NUMBER OF SCHOOLS.		NUMBER OF NEW SCHOOL HOUSES ERECTED.		DISTRICTS HAVING SUITABLE ACCOMMODATIONS FOR ALL PUPILS WHO MAY WISH TO ATTEND SCHOOL.		DISTRICTS NOT HAVING SUITABLE ACCOMMODATIONS FOR ALL PUPILS WHO MAY WISH TO ATTEND SCHOOL.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	138	155	9	5	33	34	10	10
Alpine	5	5			4	5	1	5
Anador	31	39		1	31	30		
Butte	71	79	4		47	49	9	12
Calaveras	38	39	1	1	28	30	6	5
Colusa	53	58	2	3	33	45	13	7
Contra Costa	46	53		4	28	34	7	1
Del Norte	10	10		1	7	7	1	1
El Dorado	44	44	1		36	39	4	1
Fresno	36	37	3	4	32	38	2	
Humboldt	55	58	4	3	31	33	8	9
Inyo	10	10	1	1	5	8	2	2
Kern	20	22	4	3	11	11	4	6
Lake	26	34	1	2	14	20	12	8
Lassen	14	15		1	8	9	5	5
Los Angeles	86	104	6	3	35	40	14	12
Marin	33	34	2	2	23	20	5	9
Mariposa	18	19	1	3	14	15	3	4
Mendocino	56	64	3	3	28	32	21	24
Merced	28	30	1	1	21	21	3	4
Modoc	20	20	1	2	12	14	9	6
Mono	4	4		2	2	4	2	
Monterey	37	41		4	17	22	19	16
Napa	54	57	1	4	36	38	7	8
Nevada	63	47	2	2	40	58	2	3
Placer	52	46	2	3	35	36	9	8
Plumas	25	25		2	9	13	15	10
Sacramento	110	118	1	2	101	54	9	1
San Benito	20	25		3	12	17	7	3

COUNTIES.

San Bernardino	27	30	3	1	11	15	12	9
San Diego	31	33	1	5	15	15	11	15
San Francisco	56	58	4	1	56	12	6	6
San Joaquin	99	106	3	4	68	71	8	7
San Luis Obispo	30	36	2	2	22	20	2	2
San Mateo	40	40	3	1	25	24	5	12
Santa Barbara	27	33	4	4	9	6	18	16
Santa Clara	118	124	5	4	39	41	4	9
Santa Cruz	54	59	1	1	27	26	4	4
Shasta	35	35	2	3	22	27	9	4
Sierra	25	25	1	1	20	20	4	4
Siskiyou	42	41	4	1	27	28	8	7
Solano	80	81	3	2	39	26	7	19
Sonoma	138	138	2	2	85	83	8	12
Stanislaus	43	48	1	1	37	38	6	5
Sutter	36	39	3	2	27	30	9	6
Tehama	34	35	2	2	21	20	4	10
Trinity	14	15	2	2	11	13	2	2
Tulare	55	66	12	12	29	39	23	26
Tuolumne	32	36	4	4	29	21	3	5
Ventura	18	19	1	1	12	6	1	8
Yolo	53	58	1	4	27	29	14	15
Yuba	46	48	1	1	26	23	6	9
Totals	2,336	2,485	99	122	1,410	1,414	382	326

TABLE No. 2—Continued.

COUNTIES.	DISTRICTS WHOSE SCHOOLS ARE PROVIDED WITH WATER CLOSETS.		DISTRICTS WHOSE SCHOOLS ARE NOT PROVIDED WITH WATER CLOSETS.		DISTRICTS WHOSE SCHOOLS HAVE SUFFICIENT GROUNDS.		DISTRICTS WHOSE SCHOOLS HAVE NOT SUFFICIENT GROUNDS.		DISTRICTS WHOSE SCHOOLS ARE SUITABLY IMPROVED.		DISTRICTS WHOSE SCHOOLS ARE NOT SUITABLY IMPROVED.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	37	41	6	3	38	37	5	7	24	22	19	22
Alpine	5	5	1	11	5	5	1	2	7	5	5	-----
Amador	30	19	4	4	30	28	1	2	29	29	24	1
Butte	52	57	7	5	55	59	1	2	13	19	43	42
Calaveras	27	30	7	7	32	31	2	4	7	8	27	27
Colusa	35	45	11	7	38	42	8	10	1	1	45	51
Contra Costa	35	35	-----	-----	32	30	3	5	11	13	24	22
Del Norte	6	4	2	4	8	8	-----	-----	1	1	7	7
El Dorado	34	36	6	4	38	39	2	1	21	28	19	12
Fresno	20	38	14	-----	30	35	4	-----	-----	34	34	38
Humboldt	25	33	24	9	29	32	10	10	-----	10	39	32
Inyo	6	7	4	3	10	10	-----	-----	-----	-----	10	10
Kern	8	13	7	4	15	17	-----	-----	1	-----	14	17
Lake	15	14	11	14	24	20	2	8	6	-----	20	28
Lassen	9	8	4	6	13	14	-----	-----	2	1	11	13
Los Angeles	47	48	2	4	46	46	3	6	9	11	40	41
Marin	28	29	-----	-----	26	26	2	3	6	19	22	10
Mariposa	14	8	3	11	17	19	1	-----	16	9	1	10
Mendocino	19	26	8	30	35	43	-----	-----	4	5	45	51
Merced	22	25	2	-----	24	25	14	13	4	9	20	16
Modoc	7	5	14	15	20	20	1	-----	1	-----	20	20
Mono	4	4	-----	-----	4	4	-----	-----	-----	-----	4	4
Monterey	27	26	9	12	34	37	2	1	3	3	33	35
Napa	31	35	12	11	38	42	5	4	20	18	23	28
Nevada	36	58	6	3	35	58	7	3	23	59	19	2
Placer	39	35	5	9	42	41	2	3	39	11	5	33
Plumas	19	21	5	4	23	24	1	1	1	1	23	24
Sacramento	108	54	2	1	106	55	4	-----	84	30	26	25
San Benito	15	15	4	5	16	18	3	2	5	20	14	-----
San Bernardino	16	17	7	7	17	18	6	6	5	7	18	17
San Diego	12	14	14	16	20	28	6	2	3	13	23	17

San Francisco	56	12	9	6	56	12	2	6	56	12	39	53
San Joaquin	57	71	5	9	64	71	36	6	27	24	39	53
San Luis Obispo	25	27	5	9	30	36	30			36	30	
San Mateo	25	27	2		27	25			14	5	13	22
Santa Barbara	11	5	4	13	11	9	3	9	8		6	18
Santa Clara	50	51	7	6	55	56	2	1	16	22	41	35
Santa Cruz	21	30	10	5	25	22	6	13	6	12	25	23
Shasta	20	16	11	15	29	29	2	2	12	10	19	21
Sierra	22	17	2	7	16	11	8	13	10	6	14	18
Siskiyou	31	31	4	4	34	34	1	1	2	3	33	32
Solano	43	25	3	20	37	28	9	17	17	18	29	27
Sonoma	87	88	6	7	93	95			55	57	38	38
Stanislaus	34	40	9	3	36	42	7	1	35	15	8	30
Sutter	32	36	4		28	34	8	2	12	18	24	18
Tehama	18	12	7	18	24	28	1	2	24	4	1	26
Trinity	12	12	1	1	13	12		1	6	5	7	8
Tulare	26	64	27	1	46	63	7	2	2	2	51	63
Tuolumne	18	26	7		25	24		2	24	23	1	3
Ventura	10	10	3	4	13	14					13	14
Yolo	24	38	17	6	35	35	6	9	5	7	36	37
Yuba	29	29	3	3	32	32			8	24	24	8
Totals	1,439	1,472	357	330	1,529	1,636	156	176	656	653	1,129	1,151

TABLE No. 2—Continued.

COUNTIES.	DISTRICTS WHOSE SCHOOLS ARE WELL VENTILATED.		DISTRICTS WHOSE SCHOOLS ARE NOT WELL VENTILATED.		DISTRICTS WHOSE SCHOOLS ARE SUPPLIED WITH GOOD FURNITURE.		DISTRICTS WHOSE SCHOOLS ARE SUPPLIED WITH PASSABLE FURNITURE.		DISTRICTS WHOSE SCHOOLS ARE SUPPLIED WITH POOR FURNITURE.		DISTRICTS WHOSE SCHOOLS ARE WELL SUPPLIED WITH APPARATUS.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	37	42	6	2	26	29	11	7	6	8	9	5
Alpine	4	5	1	---	1	2	2	3	2	---	2	2
Anamor	31	39	---	---	4	12	11	10	16	---	---	---
Butte	54	58	2	3	18	24	12	23	26	14	12	21
Calaveras	34	35	---	---	8	10	18	14	8	11	4	2
Colusa	42	52	4	---	19	29	---	31	27	12	12	9
Contra Costa	35	35	---	---	22	28	9	5	4	2	16	15
Del Norte	3	8	5	---	3	5	3	1	2	2	1	1
El Dorado	39	39	1	1	8	19	10	11	22	10	6	8
Fresno	33	38	1	---	8	9	8	13	18	16	1	9
Humboldt	38	42	1	---	12	14	8	13	18	15	---	---
Inyo	10	10	---	---	2	2	1	3	7	5	---	---
Kern	15	17	---	---	7	8	3	6	5	---	---	---
Lake	26	27	---	1	4	3	9	8	13	17	8	2
Lassen	3	7	10	7	6	3	---	1	7	10	3	5
Los Angeles	49	47	---	5	22	27	19	12	8	13	8	9
Marin	27	28	1	1	14	5	10	10	4	4	14	6
Mariposa	17	19	---	---	4	11	8	2	3	6	1	11
Mendocino	41	36	---	20	5	10	9	10	35	36	2	15
Merced	24	25	8	---	16	19	1	---	7	6	16	15
Modoc	21	20	---	---	4	7	---	4	17	9	1	5
Mono	4	4	---	---	2	2	---	1	2	1	---	---
Monterey	24	24	12	14	14	17	1	6	21	15	15	20
Napa	42	45	1	1	33	28	1	5	9	13	13	14
Nevada	38	61	4	---	21	44	15	10	6	7	24	40
Placer	39	38	5	6	19	24	4	3	21	17	7	6
Plumas	21	23	3	2	4	7	8	5	12	13	5	---
Sacramento	110	55	---	---	90	39	6	---	14	16	82	33
San Benito	19	12	---	8	7	8	---	4	12	8	4	16
San Bernardino	21	22	2	2	5	3	8	7	10	14	2	5
San Diego*	20	29	6	1	9	6	---	11	13	12	5	2

San Francisco	56	12	56	12	315	382	627	636	488	488
San Joaquin	74	72	60	66	12	1	6	10	38	12
San Luis Obispo	30	36	5	66	12	4	18	32	64	64
San Mateo	27	20	7	11	11	10	3	6	5	3
Santa Barbara	12	17	1	1	3	12	4	5	4	18
Santa Clara	54	57	3	29	17	7	23	21	37	2
Santa Cruz	28	35	5	10	17	10	9	15	1	9
Shasta	26	24	7	12	6	1	12	18	10	4
Sierra	24	15	9	5	6	1	12	14	2	1
Siskiyou	35	35	7	8	15	13	13	14	1	1
Solano	44	43	2	25	9	15	17	18	12	25
Sonoma	93	90	20	57	8	15	17	23	30	30
Stanislaus	43	38	5	27	4	5	24	11	5	5
Butter	26	36	10	15	4	11	13	10	4	3
Tehama	24	30	1	10	1	1	11	19	1	10
Trinity	13	13	1	6	4	4	8	3	1	1
Tulare	53	65	12	9	5	21	35	35	2	1
Tuolumne	25	26	15	8	3	12	7	6	14	4
Ventura	13	14	1	4	5	2	7	8	1	1
Yolo	41	41	3	23	17	7	13	14	5	6
Yuba	32	32	17	13	13	7	15	19	8	4
Totals	1,594	1,060	99	785	315	382	627	636	488	488

* Without furniture, 4

TABLE No. 2—Continued.

COUNTIES.	DISTRICTS WHOSE SCHOOLS ARE POORLY SUPPLIED WITH APPARATUS.		DISTRICTS WHOSE SCHOOLS ARE POORLY SUPPLIED WITH APPARATUS.		DISTRICTS MAINTAINING SCHOOLS LESS THAN SIX MONTHS.		DISTRICTS MAINTAINING SCHOOLS SIX MONTHS OR OVER, BUT LESS THAN EIGHT MONTHS.		DISTRICTS MAINTAINING SCHOOLS EIGHT MONTHS OR OVER.		AVERAGE NUMBER OF MONTHS OF ALL THE SCHOOLS IN THE COUNTY.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	11	24	6	15	---	1	7	2	36	152	8.76	9.02
Alpine	2	3	---	---	1	2	4	2	---	1	6.50	6.50
Anamor	14	9	15	21	---	2	17	9	14	14	7.98	7.50
Butte	15	22	29	18	4	3	42	14	10	19	6.48	6.33
Calaveras	7	13	23	20	---	---	20	12	14	17	7.42	7.44
Colusa	14	5	19	38	2	---	32	7	14	16	6.67	6.75
Contra Costa	14	17	5	3	---	---	13	11	21	24	8.08	8.34
Del Norte	2	1	5	6	---	1	6	1	2	1	6.56	6.37
El Dorado	17	17	17	15	2	1	22	26	16	14	7.50	7.24
Fresno	10	13	23	16	3	2	19	27	12	8	7.11	6.42
Humboldt	9	19	30	23	1	1	22	20	15	21	7.34	7.49
Inyo	---	---	---	---	---	---	---	---	---	---	---	---
Kern	3	13	4	2	3	---	6	2	6	7	6.62	6.60
Lake	6	10	13	12	3	2	21	9	2	3	6.30	6.30
Lassen	---	---	---	---	---	---	8	5	4	6	6.74	7.21
Los Angeles	30	18	11	35	1	---	3	---	45	53	9.08	9.00
Marin	10	14	4	9	2	---	12	12	13	19	7.86	8.10
Mariposa	11	2	5	6	1	1	9	6	7	4	7.11	6.66
Mendocino	21	31	26	10	3	6	21	29	24	21	7.14	6.75
Merced	5	---	4	10	1	---	15	4	8	8	7.15	7.30
Modoc	---	---	---	---	---	---	10	18	2	2	5.77	6.09
Mono	2	1	2	3	---	---	2	2	---	---	7.81	6.50
Monterey	2	5	19	13	---	---	16	19	20	19	7.93	7.71
Napa	13	18	17	14	---	---	29	32	14	14	7.14	7.00
Nevada	6	12	12	10	---	---	8	9	34	58	8.93	8.56
Placer	3	12	34	26	---	---	17	13	27	26	8.22	8.00
Plumas	4	9	15	16	6	---	14	13	4	6	6.75	7.08
Sacramento	21	18	7	4	1	1	26	42	29	13	7.76	8.19
San Benito	9	---	---	4	1	2	9	8	9	10	7.14	7.13
San Bernardino	9	9	12	10	1	1	9	10	12	13	7.62	7.42
San Diego	2	8	13	20	3	1	12	20	11	13	7.52	7.34

COUNTIES.

[illegible]

TABLE No. 2—Continued.

COUNTIES.	NUMBER OF SCHOOLS FOR COLORED CHILDREN.		NUMBER OF PUPILS ATTENDING SCHOOLS FOR COLORED CHILDREN.		DISTRICTS WHICH HAVE EMPLOYED THE SAME TEACHER MORE THAN ONE YEAR.		DISTRICTS NOT HAVING SUFFICIENT FUNDS FOR AN EIGHT MONTHS' SCHOOL.		NUMBER OF SCHOOL VISITS MADE BY COUNTY SUPERINTENDENTS	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda					21	21	18	11	111	93
Alpine					1	1	2	2	1	7
Amador	1		7		6	5	20	30	23	26
Butte	1		18		5	10	46	49	78	134
Calaveras					10	12	24	30	40	60
Colusa	1	1	6	7	5	11	34	33	74	58
Contra Costa					8	15	18		54	57
Del Norte					2	2	8	7	17	10
El Dorado					7	9	28	28	58	51
Fresno					8	8	31	25	8	47
Glenn					9	10	25	27	34	37
Humboldt					1			10	13	14
Inyo								9	21	21
Kern						3	7	26	66	65
Lake					5	9	8	14	19	16
Lassen					1	5		*	61	35
Los Angeles	1	1	45	15	27	38	*	*	55	53
Marin					2	8	21	11	18	18
Mariposa						8	15	10	73	66
Mendocino					11	11	30	27	61	61
Merced					5	4	18	21	14	15
Modoc						3	20	17	3	5
Mono						1	4	3	79	96
Monterey					10	11	22	28	29	26
Napa	1	1	15	18	9	8	43	47	107	69
Nevada	2	1	26	52	28	24	22	25	56	29
Placer					13	10	29	27	24	29
Plumas					5	4	16	18	114	80
Sacramento	1	1	50	49	11		31	35	21	11
San Benito								11	22	30
San Bernardino					4	6	15	11		

TABLE No. 2—Continued.

COUNTIES.	NUMBER OF SCHOOL VISITS MADE BY SCHOOL TRUSTEES.		NUMBER OF SCHOOL VISITS MADE BY OTHER PERSONS.		NUMBER OF MALE TEACHERS.		NUMBER OF FEMALE TEACHERS.		TOTAL NUMBER OF TEACHERS.		NUMBER OF TEACHERS HOLDING FIRST GRADE STATE CERTIFICATES.	
	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	416	232	3,719	2,800	34	34	104	121	138	155	77	49
Alpine	9	10	27	115	2	2	8	5	10	7	3	3
Amador	90	84	662	744	18	17	22	9	40	36	9	5
Butte	263	262	1,763	2,121	36	35	37	43	74	78	34	8
Calaveras	100	104	798	903	20	20	18	19	38	39	26	3
Colusa	180	154	877	669	41	36	13	18	54	55	40	5
Contra Costa	113	138	763	821	16	19	30	34	48	53	35	6
Del Norte	58	37	150	172	6	5	4	6	10	11	7	4
El Dorado	138	111	1,138	649	22	21	22	22	44	43	25	14
Fresno	138	170	504	735	22	28	14	11	36	39	21	5
Humboldt	114	123	418	565	32	33	23	25	55	58	35	18
Inyo	32	32	164	178	6	5	4	5	10	10	4	3
Kern	47	43	179	240	14	10	7	17	21	27	11	3
Lake	107	114	422	586	26	16	32	17	58	33	21	11
Lassen	56	69	250	315	10	12	4	3	14	15	6	3
Los Angeles	321	287	1,514	901	44	59	42	45	86	104	57	12
Marin	67	72	431	501	12	13	21	21	33	34	17	8
Mariposa	45	86	317	369	13	10	7	11	20	21	13	3
Mendocino	145	156	943	948	29	31	27	33	56	64	37	20
Merced	113	77	309	393	9	13	19	17	28	30	17	6
Modoc	62	80	221	386	14	18	6	4	20	22	9	1
Mono	13	22	50	58	1	1	3	3	4	4	1	
Monterey	196	181	792	911	26	29	22	23	48	52	28	11
Napa	148	160	905	1,253	22	23	32	34	54	57	33	6
Nevada	300	516	1,384	1,520	30	34	33	33	63	67	42	9
Placer	141	229	812	977	17	16	35	38	52	54	34	9
Plumas	73	100	385	581	8	13	17	12	25	25	17	5
Sacramento	665	215	2,010	848	20	24	93	94	113	118	99	78
San Benito	71	77	266	383	12	10	25	15	37	23	17	4
San Bernardino	108	74	349	818	15	18	12	13	27	31	17	2
San Diego	120	143	261	302	16	17	13	18	29	35	18	16
San Francisco	2,087	1,988	16,240	17,077	71	72	502	563	573	635	349	44

San Joaquin-----	280	279	3,074	4,905	49	39	54	66	103	105	94	26
San Luis Obispo-----	54	111	407	368	16	20	19	23	35	43	14	4
San Mateo-----	124	150	655	822	14	12	26	28	40	40	31	7
Santa Barbara-----	67	75	645	545	9	16	17	18	26	31	20	4
Santa Clara-----	174	758	870	2,699	33	41	85	83	118	124	77	53
Santa Cruz-----	197	174	947	1,240	13	15	41	44	53	44	21	15
Shasta-----	81	80	522	659	14	14	21	20	35	34	21	3
Sierra-----	51	50	290	323	11	13	14	12	25	25	11	3
Siskiyou-----	162	181	801	830	16	21	18	15	34	36	22	5
Solano-----	341	249	1,519	1,460	36	29	44	52	80	81	48	9
Sonoma-----	377	399	1,864	2,795	75	70	90	88	165	158	41	24
Stanislaus-----	134	120	763	719	24	25	22	21	46	46	31	6
Sutter-----	118	105	863	543	24	21	15	18	39	39	19	11
Tehama-----	104	172	407	747	14	9	18	26	32	35	13	13
Trinity-----	24	45	118	194	9	8	5	7	14	15	7	3
Tulare-----	208	201	365	1,325	36	53	20	25	56	78	21	14
Tuolumne-----	98	113	504	788	11	22	21	33	32	33	21	13
Ventura-----	37	37	225	377	8	10	10	9	18	19	10	3
Yolo-----	110	139	681	753	30	26	38	31	68	56	26	4
Yuba-----	159	141	618	678	23	26	24	22	47	48	31	15
Totals-----	9,456	9,745	55,101	62,611	1,129	1,184	1,853	1,983	2,982	3,167	1,438	609

TABLE No. 2—Continued.

COUNTIES.	NUMBER OF TEACHERS HOLDING SECOND GRADE STATE CERTIFICATES.		NUMBER OF TEACHERS HOLDING THIRD GRADE STATE CERTIFICATES.	
	1876.	1877.	1876.	1877.
Alameda	43	44	18	13
Alpine	7	2		
Amador	18		13	
Butte	30	4	9	
Calaveras	10		2	
Colusa	13	1	1	
Contra Costa	7	4	4	2
Del Norte	2		1	
El Dorado	9	5	8	
Fresno	13		2	1
Humboldt	15	1	5	
Inyo	2		1	1
Kern	9	1	1	
Lake	4	1	2	1
Lassen	7		1	
Los Angeles	22	38	1	32
Marin	17	3	2	4
Mariposa	4	3	2	
Mendocino	16	5	3	3
Merced	9	3		
Modoc	9		1	
Mono	2			
Monterey	14	6	6	2
Napa	14	1	7	
Nevada	16	6	5	
Placer	14	2	1	1
Plumas	4		4	
Sacramento	11	9	1	1
San Benito	4	1	3	
San Bernardino	7		3	
San Diego	10	11	1	2
San Francisco	108	29	80	15
San Joaquin	9			
San Luis Obispo	15	5	7	2
San Mateo	9	3		2
Santa Barbara	6	1		
Santa Clara	25	30	16	16
Santa Cruz	19	1	14	3
Shasta	7		4	
Sierra	10	1	4	1
Siskiyou	13		7	
Solano	24	6	8	4
Sonoma	36	20	14	29
Stanislaus	12	1	3	
Sutter	20	1	1	
Tehama	8		9	
Trinity	4	1	3	
Tulare	26	3	8	
Tuolumne	11	19		3
Ventura	5		3	
Yolo	14	6	13	
Yuba	10	3	6	
Totals	753	281	309	138

TABLE No. 2—Continued.

COUNTIES.	AVERAGE MONTHLY WAGES PAID TO MALE TEACHERS.		AVERAGE MONTHLY WAGES PAID TO FEMALE TEACHERS.	
	1876.	1877.	1876.	1877.
Alameda	\$106 57	\$109 50	\$69 10	\$79 25
Alpine	65 00	75 00	63 33	65 00
Amador	77 22	86 00	60 59	62 00
Butte	81 42	84 31	65 51	68 70
Calaveras	72 00	77 00	60 00	60 00
Colusa	83 30	82 40	70 00	74 00
Contra Costa	90 00	84 21	68 43	68 37
Del Norte	83 37	80 00	52 46	59 00
El Dorado	76 13	79 75	67 04	62 25
Fresno	92 24	86 24	74 64	70 50
Humboldt	83 50	83 33	72 50	72 00
Inyo	98 33	91 62	73 75	91 00
Kern	90 00	100 00	75 00	75 00
Lake	76 62	75 14	67 22	71 00
Lassen	81 12	76 66	66 50	70 00
Los Angeles	86 70	80 25	86 70	70 00
Marin	84 65	81 63	60 10	66 86
Mariposa	80 00	81 90	65 00	73 50
Mendocino	75 00	80 00	67 50	67 00
Merced	85 50	85 83	78 00	77 31
Modoc	80 00	77 50	75 00	65 00
Mono	100 00	87 50	66 66	76 66
Monterey	87 00	85 22	68 00	70 00
Napa	77 61	76 00	64 40	60 00
Nevada	98 00	90 00	70 00	73 00
Placer	85 66	87 00	68 00	66 70
Plumas	80 00	86 00	79 00	69 00
Sacramento	75 00	71 00	65 00	71 00
San Benito	85 00	93 00	65 00	65 00
San Bernardino	79 33	77 00	73 70	73 75
San Diego	77 29	78 41	73 41	74 77
San Francisco	161 49	132 35	79 23	78 95
San Joaquin	84 00	81 00	73 00	76 00
San Luis Obispo	80 00	-----	78 00	-----
San Mateo	84 16	87 92	61 00	63 21
Santa Barbara	96 90	80 50	70 00	62 00
Santa Clara	87 00	97 00	64 50	70 00
Santa Cruz	88 00	99 00	63 00	60 00
Shasta	80 00	80 00	65 00	65 00
Sierra	85 90	86 00	69 64	71 00
Siskiyou	75 47	78 75	53 80	65 33
Solano	90 00	83 63	66 00	64 15
Sonoma	83 00	84 00	64 00	65 00
Stanislaus	75 02	77 54	75 02	75 54
Sutter	77 00	76 00	70 00	71 00
Tehama	84 25	90 00	67 50	71 73
Trinity	86 00	83 00	68 00	69 54
Tulare	84 00	86 00	72 85	75 00
Tuolumne	70 00	74 00	55 00	56 00
Ventura	80 00	84 00	65 00	63 50
Yolo	86 00	85 00	72 00	74 00
Yuba	88 26	79 66	70 12	69 15
Average	\$85 00	\$83 78	\$68 15	\$69 68

TABLE No. 2—Continued.

COUNTIES.	NUMBER OF TEACHERS WHO ATTENDED COUNTY INSTITUTES.		NUMBER OF TEACHERS WHO SUBSCRIBED FOR SOME EDUCATIONAL JOURNAL.	
	1876.	1877.	1876.	1877.
Alameda	121	95	37	46
Alpine	None held.	None held.	1	—
Amador	1	36	9	7
Butte	None held.	46	20	24
Calaveras	36	39	1	10
Colusa	42	50	18	30
Contra Costa	None held.	28	15	10
Del Norte	None held.	None held.	3	2
El Dorado	29	36	7	6
Fresno	21	25	13	8
Humboldt	45	55	30	50
Inyo	1	—	1	3
Kern	None held.	—	5	15
Lake	24	26	5	13
Lassen	None held.	—	7	—
Los Angeles	64	98	26	70
Marin	16	24	18	4
Mariposa	None held.	—	5	2
Mendocino	38	58	20	15
Mered	7	25	15	3
Modoc	10	20	12	8
Mono	None held.	—	—	—
Monterey	47	43	31	24
Napa	42	52	9	10
Nevada	60	59	8	20
Placer	51	50	18	20
Plumas	13	14	8	7
Sacramento	42	130	71	20
San Benito	None held.	—	2	3
San Bernardino	None held.	30	6	11
San Diego	None held.	29	14	8
San Francisco	None held.	None held.	42	154
San Joaquin	None held.	—	25	30
San Luis Obispo	28	41	25	40
San Mateo	None held.	32	4	8
Santa Barbara	None held.	1	10	12
Santa Clara	86	125	25	14
Santa Cruz	51	56	18	6
Shasta	None held.	20	11	10
Sierra	None held.	—	3	5
Siskiyou	31	29	6	8
Solano	71	63	34	54
Sonoma	115	121	50	24
Stanislaus	30	37	—	10
Sutter	21	34	2	12
Tehama	23	33	2	4
Trinity	None held.	—	2	4
Tulare	45	56	40	36
Tuolumne	None held.	—	10	3
Ventura	None held.	None held.	—	2
Yolo	41	55	11	6
Yuba	44	38	25	29
Totals	1,298	1,819	780	820

TABLE No. 2—Continued.

COUNTIES.	NUMBER OF TEACHERS WHO ARE GRADU- ATES OF THE CALI- FORNIA STATE NOR- MAL SCHOOL.		NUMBER OF TEACHERS WHO ARE GRADUATES OF ANY STATE NOR- MAL SCHOOL.		NUMBER OF TRUSTEES APPOINTED BY COUNTY SUPERIN- TENDENTS.	
	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	26	56	54	78	28	19
Alpine	1	1	2	1	2	3
Amador	3	1	3	3	5	5
Butte					46	
Calaveras	3	3	4	4	11	31
Colusa	1	2	7	5	51	30
Contra Costa	5	6	2	3	27	23
Del Norte					1	2
El Dorado	4	3	4	4	13	11
Fresno	4		6	4	47	43
Humboldt			9	1	10	10
Inyo		3	1	2	10	13
Kern	1	2	3	5	13	15
Lake	2	4	4	3	28	20
Lassen	2	1	2	1	7	5
Los Angeles	4	5	3	8	47	9
Marin	4	4	4	3	16	16
Mariposa	1	1	1	2	10	10
Mendocino	1	6	6	8	12	35
Merced	4	2	4	1	22	
Modoc	1	1	1	1	15	7
Mono					1	3
Monterey	3	2	5	2	41	43
Napa	3	5		3	48	40
Nevada	2	2	3	6	10	9
Placer	4	2	7	6	25	15
Plumas	2		1	2	9	10
Sacramento	6	10		14	15	14
San Benito	1	1	1	1	25	18
San Bernardino	3	2			7	18
San Diego		1	1	2	27	20
San Francisco	74	72	38	29		
San Joaquin	6	5	18	11	80	115
San Luis Obispo	7				10	20
San Mateo	5				20	10
Santa Barbara		3		9	8	9
Santa Clara	33	43	17	25	75	28
Santa Cruz	1	5	5	12	22	20
Shasta	2	3	4	4	6	13
Sierra			2		6	14
Siskiyou		1	1	1	27	34
Solano	8	7	12	11	36	60
Sonoma	13	10	20	17	30	20
Stanislaus				2		21
Sutter			1	3	22	14
Tehama			1		10	20
Trinity					3	8
Tulare			2	21	50	102
Tuolumne	3	3	4		10	5
Ventura	5	1		3	5	3
Yolo	2	2	4	2	1	75
Yuba	4	1	5	5	9	19
Totals	254	282	272	328	1,059	1,107

TABLE No. 2—Continued.

COUNTIES.	NUMBER OF CERTIFICATES GRANTED TO MALE TEACHERS.		NUMBER OF CERTIFICATES GRANTED TO FEMALE TEACHERS.	
	1876.	1877.	1876.	1877.
Alameda	19	7	52	92
Alpine	1		3	1
Amador	3	5	8	17
Butte	12	10	16	12
Calaveras	7	3	5	7
Colusa	16	17	11	10
Contra Costa	4	2	10	16
Del Norte	2		3	
El Dorado	3	6	10	11
Fresno	10	10	9	18
Humboldt	13	8	9	5
Inyo	5	6	6	9
Kern	10	4	5	9
Lake	2	2	3	5
Lassen	18	13	17	15
Los Angeles	8	6	31	35
Marin	1		3	2
Mariposa	1	13	6	10
Mendocino	4	4	6	3
Merced	7	6	4	4
Modoc		1		
Mono	12	13	11	10
Monterey	8	9	18	16
Napa	12	8	16	13
Nevada	18	7	21	15
Placer	6	8	15	9
Plumas	9	16	97	29
Sacramento	6	2	13	7
San Benito	7	10	10	9
San Bernardino	3	1	5	
San Diego	33	25	238	222
San Francisco	8	13	24	27
San Joaquin	7	8	7	7
San Luis Obispo	14	8	31	22
San Mateo	4	10	17	13
Santa Barbara	10	20	40	58
Santa Clara	5	2	12	15
Santa Cruz	8	4	12	2
Shasta	4	4	6	6
Sierra	4	9	7	4
Siskiyou	12	7	36	9
Solano	32	20	47	41
Sonoma	8	7	5	5
Stanislaus	9	12	9	4
Sutter	7	7	13	1
Tehama			4	1
Trinity	17	16	13	10
Tulare	4	6	12	4
Tuolumne	1		2	
Ventura	6	10	5	12
Yolo	7	16	18	20
Yuba				
Totals	434	401	981	872

TABLE No. 2—Continued.

COUNTIES.	NUMBER OF CERTIFICATES RENEWED.		NUMBER OF APPLICANTS REJECTED.		SALARY OF COUNTY SUPERINTENDENTS.	
	1876.	1877.	1876.	1877.	1876.	1877.
Alameda	5	10	65	137	\$1,800 00	\$1,800 00
Alpine		2			100 00	100 00
Amador	9	11	27		600 00	600 00
Butte	9	13	28	30	1,500 00	1,500 00
Calaveras	3	4	2	4	700 00	700 00
Colusa	4	4	16	31	700 00	700 00
Contra Costa	3	5	11	18	750 00	750 00
Del Norte	2			1	250 00	250 00
El Dorado	3		11	18	900 00	900 00
Fresno	2	7	11	23	900 00	900 00
Humboldt	9	2	34	35	700 00	700 00
Inyo		1			400 00	400 00
Kern		3	9	7	500 00	500 00
Lake	4	2	12	3	650 00	650 00
Lassen	1		6	3	260 00	280 00
Los Angeles	6	15	28	1	1,500 00	1,500 00
Marin	3	4	26	38	1,000 00	1,000 00
Mariposa	3	2		3	350 00	350 00
Mendocino	7	9	11	20	1,020 00	1,140 00
Merced		8	10	7	1,000 00	1,000 00
Modoc	5	3	3	7	300 00	300 00
Mono		1		1	150 00	150 00
Monterey	3	3	21	33	800 00	800 00
Napa		6	29	39	600 00	600 00
Nevada	3	21	60	50	1,000 00	1,000 00
Placer	2	9	21	22	1,200 00	1,200 00
Plumas	2	10	5	9	500 00	500 00
Sacramento			46	60	1,600 00	1,600 00
San Benito		2	27	7	500 00	500 00
San Bernardino	3	2	17	29	460 00	460 00
San Diego	3	2	2	12	1,000 00	1,000 00
San Francisco	88	103	205	243	4,000 00	4,000 00
San Joaquin			40	36	2,000 00	2,000 00
San Luis Obispo	4	6	6	13	567 00	567 00
San Mateo	4	7	24	48	540 00	540 00
Santa Barbara	2	2	11	20	700 00	700 00
Santa Clara	21	7	127	146	1,200 00	1,200 00
Santa Cruz	11	15	22	34	600 00	600 00
Shasta	2	5	13	7	620 00	620 00
Sierra	8	5	3	4	480 00	480 00
Siskiyou	5	8	3	7	700 00	700 00
Solano	2	3	30	62	600 00	1,200 00
Sonoma		25	57	70	1,600 00	1,600 00
Stanislaus	6	3	18	23	1,000 00	1,000 00
Sutter	2	5	7	1	720 00	740 00
Tehama	4	4	11	19	580 00	580 00
Trinity				1	400 00	400 00
Tulare	10		15	17	500 00	500 00
Tuolumne	2	2	7	5	500 00	520 00
Ventura	4		10		300 00	600 00
Yolo	18	7	18	41	1,000 00	1,000 00
Yuba			12	13	1,000 00	1,000 00
Totals	290	368	1,097	1,458	\$43,297 00	\$44,277 00

TABLE No. 3.

Statement of financial statistics showing the receipts from all sources of school revenue for the school year ending June 30th, 1876.

COUNTIES.	Balance on hand at the Beginning of School Year-----	Cash Received from State Apportionment-----	Cash Received from County Taxes-----	Cash Received from City and District Taxes-----	Cash Received from Miscellaneous Sources-----	Total Receipts-----
Alameda-----	\$25,712 44	\$70,295 37	\$41,912 04	\$84,496 92	\$14,531 19	\$236,977 96
Alpine-----	914 73	636 49	1,583 34	-----	-----	3,134 56
Amador-----	1,775 06	17,055 23	8,350 37	-----	-----	27,180 66
Butte-----	10,425 44	26,764 77	19,013 32	11,671 09	133 10	68,007 72
Calaveras-----	6,718 53	16,960 00	4,230 77	-----	562 75	28,492 05
Colusa-----	6,516 64	17,736 93	17,023 40	676 33	476 12	42,429 42
Contra Costa-----	17,233 12	23,360 40	13,660 50	4,577 45	1,681 81	60,513 28
Del Norte-----	839 05	3,440 47	2,160 59	358 00	-----	6,818 11
El Dorado-----	8,770 68	17,926 46	6,916 86	579 00	2,472 85	36,665 85
Fresno-----	9,631 01	11,198 95	10,189 41	-----	-----	31,019 37
Humboldt-----	17,245 53	22,063 04	21,037 42	3,849 45	-----	64,215 44
Inyo-----	869 05	3,048 96	2,480 68	-----	2,294 58	8,693 27
Kern-----	5,216 69	7,856 75	8,748 25	6,038 82	-----	27,860 51
Lake-----	4,367 51	10,510 06	5,482 45	768 85	25 25	21,154 12
Lassen-----	3,340 16	5,334 00	4,246 45	895 37	100 00	13,915 98
Los Angeles-----	27,345 75	59,799 42	24,528 40	16,596 28	13,893 00	142,162 85
Marin-----	18,215 62	12,636 43	5,204 52	1,498 27	835 67	38,390 51
Mariposa-----	3,107 90	6,591 20	4,217 44	-----	-----	13,916 54
Merced-----	14,076 92	21,534 39	13,183 02	7,323 80	-----	56,138 13
Modoc-----	7,429 45	8,993 28	10,426 61	1,607 40	-----	28,066 74
Modoc-----	2,834 65	6,459 36	2,936 16	-----	-----	19,230 17

Mono	700 39	651 17	1,348 83	1,300 00	90 00	4,090 39
Monterey	7,567 12	25,236 48	12,612 70	2,533 29	---	47,949 59
Napa	14,230 61	21,672 96	11,888 00	6,751 17	---	54,542 74
Nevada	18,835 55	36,108 89	27,870 90	199 50	999 65	81,014 49
Placer	6,410 67	18,313 10	18,011 08	4,987 75	1,312 60	49,035 20
Plumas	4,738 77	6,404 14	7,978 26	---	597 50	19,718 67
Sacramento	12,500 90	49,759 24	35,778 30	40,222 89	1,402 94	139,664 27
San Benito	2,911 14	10,848 37	5,652 60	386 00	210 49	20,008 60
San Bernardino	7,659 15	15,137 28	4,086 15	1,118 95	48 50	28,050 03
San Diego	9,027 12	14,084 93	8,004 50	70 00	532 62	31,719 17
San Francisco	90,883 06	314,736 28	---	310,760 69	82,173 90	798,543 93
San Joaquin	19,368 48	52,761 16	28,080 88	15,960 37	3,373 07	119,543 96
San Luis Obispo	9,036 04	15,543 13	8,345 80	646 95	712 09	34,194 01
San Mateo	17,754 08	17,794 93	12,412 20	784 04	300 00	49,225 25
Santa Barbara	12,581 37	17,466 99	9,315 05	671 15	685 76	40,530 32
Santa Clara	19,599 49	69,868 59	28,261 92	37,740 14	984 26	156,454 40
Santa Cruz	14,697 50	24,668 16	15,731 64	218 35	22,060 95	77,376 60
Shasta	7,900 15	11,624 58	6,724 42	104 38	120 00	26,473 53
Sierra	5,162 39	8,563 20	7,704 91	1,112 47	914 49	23,457 46
Siskiyou	4,579 23	13,094 40	13,265 50	956 30	1,096 00	32,991 43
Solano	13,017 03	35,721 96	27,346 43	8,046 18	491 64	81,623 24
Sonoma	24,836 63	55,379 96	31,096 94	5,260 24	717 23	115,491 00
Stanislaus	12,581 90	14,661 12	12,743 83	---	---	39,986 85
Sutter	8,524 71	11,898 57	10,980 00	3,589 22	125 50	35,118 00
Tehama	4,227 13	11,658 48	10,215 50	---	---	26,101 11
Trinity	2,574 29	4,904 12	6,003 76	---	50 00	13,532 17
Tulare	5,220 31	21,792 90	15,882 93	6,117 29	400 00	49,343 43
Tuolumne	3,949 80	13,778 95	3,933 87	1,524 00	1,091 13	24,327 75
Ventura	5,255 09	8,616 96	4,658 90	2,807 03	---	21,337 98
Yolo	6,881 98	19,632 87	14,370 40	1,869 97	141 30	42,896 52
Yuba	7,669 98	20,037 12	12,652 00	3,361 76	558 46	44,279 32
Totals	\$572,897 99	\$1,330,862 95	\$640,610 20	\$600,027 11	\$158,206 40	\$3,302,604 65

TABLE No. 3—Continued.

Statement of financial statistics showing the receipts from all sources of school revenue for the school year ending June 30th, 1877.

COUNTIES.	Balance on hand at the Beginning of School Year	Cash Received from State Apportionment	Cash Received from County Taxes	Cash Received from City and District Taxes	Cash Received from Miscellaneous Sources	Total Receipts
Alameda	\$28,998 90	\$88,472 84	\$53,959 60	\$89,959 60	\$2,769 00	\$264,159 49
Alpine	1,360 16	678 36	2,170 39			4,208 91
Amador	5,434 81	19,517 37	5,457 84			30,410 02
Butte	11,157 32	28,718 67	20,262 99	5,529 77	656 50	66,325 25
Calaveras	3,869 86	16,863 30	5,146 60		1,517 50	27,397 26
Colusa	5,707 17	19,337 46	18,353 35	574 68	463 00	44,437 66
Contra Costa	15,691 67	25,505 83	16,689 12	5,045 11	950 51	63,882 24
Del Norte	602 61	3,495 46	1,995 00	493 00		6,586 07
El Dorado	7,410 27	19,211 44	6,802 50	2,229 75	985 40	36,639 36
Fresno	5,913 42	12,522 45	13,669 81			30,605 68
Humboldt	19,652 32	26,163 68	17,493 65		632 73	63,942 38
Inyo	1,241 57	2,880 78	2,603 59		894 84	7,620 78
Kern	6,448 47	8,736 14	7,978 20	5,135 38		28,298 19
Lake	4,360 93	11,939 38	6,757 40	2,983 61	3,721 25	29,762 57
Lassen	3,972 70	5,086 75	2,562 25	520 00	853 59	12,995 30
Los Angeles	31,447 44	74,309 63	25,091 50	32,003 59	607 50	163,455 66
Marin	10,880 74	14,165 23	10,196 94	881 20	274 21	36,398 32
Mariposa	3,164 11	7,557 85	4,866 28		273 98	15,862 22
Merced	13,441 11	24,941 94	13,845 32	1,395 32	404 15	54,927 84
Modoc	6,864 66	9,384 49	6,590 85	2,223 11	356 90	25,420 01
Mono	2,296 93	6,200 46	4,195 82	216 00		13,009 21
	409 59	897 75	1,504 72	311 67	631 63	3,755 36

Monterey	7,984 32	26,341 98	10,956 00	1,317 83	46,605 13
Napa	12,493 86	23,610 10	14,156 80	868 75	51,184 51
Nevada	22,418 76	37,961 03	25,939 24	668 85	88,622 63
Placer	5,463 90	19,506 50	22,423 32	3,314 42	51,521 45
Plumas	5,599 12	7,012 07	9,498 09	1,071 67	23,551 55
Sacramento	52,006 16	51,892 29	30,393 35	36,095 46	170,937 26
San Benito	2,694 51	12,471 64	6,058 71	869 38	22,694 24
San Bernardino	6,391 27	16,789 92	5,376 86	2,216 51	30,986 56
San Diego	10,066 93	13,303 01	8,660 62	508,330 02	32,070 56
San Francisco	124 00	308,609 24		13,820 33	940,616 16
San Joaquin	20,532 46	41,238 70	46,578 80	2,902 12	125,072 41
San Luis Obispo	9,389 73	18,361 86	5,289 66	13,026 00	46,007 25
San Mateo	12,441 88	21,053 36	14,858 00	58 80	48,561 69
Santa Barbara	10,817 41	21,593 88	8,963 38	769 20	51,645 75
Santa Clara	24,517 38	70,514 63	36,560 00	25,630 76	176,194 33
Santa Cruz	15,781 08	27,080 21	24,564 27	709 70	82,754 81
Shasta	6,453 20	12,740 00	7,922 92	6 00	27,881 82
Sierra	6,202 62	8,825 88	9,274 24	806 41	26,109 15
Siskiyou	4,381 62	14,124 60	12,397 65	206 38	31,170 25
Solano	8,502 77	35,795 75	29,599 00	7,157 83	81,891 86
Sonoma	21,330 58	58,862 00	30,558 26	7,406 04	118,202 36
Stanislaus	9,863 74	15,457 26	10,643 96	1,720 65	37,845 71
Sutter	6,171 27	12,562 10	10,531 00	2,478 65	33,747 57
Tehama	4,688 08	12,900 00	11,106 20	113 40	28,807 68
Trinity	4,100 30	5,284 17	5,457 50	118 50	14,360 47
Tulare	6,162 21	25,635 64	18,412 02	7,642 88	57,054 72
Tuolumne	4,163 26	14,214 99	4,518 56	100 00	23,148 31
Ventura	6,053 48	10,384 87	6,536 25	2,783 33	25,757 93
Yolo	6,484 63	22,277 48	16,462 84	2,402 90	4,871 35
Yuba	8,929 71	21,713 58	11,400 00	3,437 36	45,487 65
Totals	\$511,727 90	\$1,475,101 41	\$703,131 22	\$783,102 51	\$3,610,103 35

TABLE No. 4.

Financial statistics, showing school expenditures for the school year ending June 30th, 1876.

COUNTIES.	Amount Paid for Teachers' Salaries.	Amount Paid for Rent, Repairs, Fuel, and Contingent Expenses	Amount Paid for School Libraries.	Amount Paid for School Apparatus.	Total Current Expenses	Amount Paid for Sites, Buildings, and School Furniture	Total Expenditures.	Total Receipts	Balance on hand at Close of School Year
Alameda	\$122,943 75	\$32,261 89	\$1,276 30	\$637 94	\$157,119 88	\$49,047 34	\$206,167 22	\$236,977 96	\$30,810 74
Alpine	2,016 00	75 38	94 90	40 88	2,227 16		2,227 16	3,134 56	907 40
Amador	20,424 90	2,006 92	351 42	97 06	22,880 30	422 42	23,302 72	27,180 66	3,877 94
Butte	35,189 95	6,717 89	815 37	327 75	43,050 96	13,781 24	56,832 20	68,007 72	11,175 32
Calaveras	20,325 93	2,440 15	542 09	243 09	23,551 26	1,070 93	24,622 19	28,492 05	3,869 86
Colusa	29,433 69	4,846 89	769 53	130 06	35,180 17	1,149 74	36,329 91	42,429 42	6,099 51
Contra Costa	32,276 31	7,863 77	1,507 38	80 21	41,727 67	3,329 49	45,057 16	60,513 28	15,456 12
Del Norte	5,157 00	485 51	163 10	10 25	5,825 86	31 62	5,857 48	6,818 11	960 63
El Dorado	23,180 39	2,233 18	855 73	127 37	26,396 67	2,858 10	29,254 77	36,665 85	7,411 08
Fresno	22,510 80	1,826 10	912 85	95 74	25,345 49	460 45	25,805 94	31,019 37	5,213 43
Humboldt	33,732 14	3,426 21	651 00	278 15	38,087 50	5,899 42	43,976 92	64,215 44	20,238 52
Inyo	5,235 00	471 43	523 50		6,229 93	1,221 77	7,451 70	8,693 27	1,241 57
Kern	12,248 34	2,225 26	406 46	133 00	15,013 66	7,014 72	22,028 38	27,860 51	5,832 13
Lake	13,017 65	1,179 43	953 51	172 60	15,323 19	1,600 24	16,923 43	21,154 12	4,230 69
Lassen	7,525 71	718 19	212 19	461 67	8,918 76	1,090 37	10,009 13	13,915 98	3,906 85
Los Angeles	70,078 50	12,542 74	1,870 63	60 00	84,551 87	27,195 32	111,747 19	142,162 85	30,415 66
Marin	18,906 91	3,750 77	1,058 20	79 40	23,795 28	3,071 19	26,866 47	38,390 51	11,524 04
Mariposa	9,797 37	822 17			10,619 54	139 50	10,759 04	13,916 54	3,157 50
Mendocino	30,787 02	3,221 51	847 99	576 38	35,432 90	7,264 54	42,697 44	56,138 13	13,440 69
Merced	16,773 99	2,490 90	748 34	95 55	20,108 78	1,093 25	21,202 03	28,066 74	6,864 71
Modoc	8,686 06	434 24	572 40	150 54	9,843 24		9,843 24	12,230 17	2,386 83
Mono	1,882 50	363 29			2,245 79	1,435 00	3,680 79	4,090 39	409 60
Monterey	31,668 81	3,834 71	1,129 20	90 22	36,742 94	3,279 32	40,022 26	47,949 59	7,927 32
Napa	29,520 02	3,705 37	1,561 89	35 00	34,822 29	7,216 60	42,038 88	54,542 74	12,503 86

Nevada-----	46,930 49	9,403 55	1,521 24	515 35	58,370 63	3,236 76	61,607 39	84,014 49	22,407 10
Placer-----	31,176 00	4,812 60	849 86	468 91	37,337 37	7,833 13	45,170 50	49,035 20	3,864 70
Thomas-----	12,530 27	1,098 76	174 47	71 15	13,874 67	244 90	14,119 55	19,718 67	5,599 12
Sacramento--	72,505 09	8,211 10	1,622 53	614 94	82,953 66	3,113 05	86,066 71	139,064 27	53,597 56
San Benito---	14,125 21	1,565 78	375 29	168 16	16,234 44	1,323 73	17,558 17	20,008 60	2,450 43
San Bernardino	16,868 17	1,582 42	931 55	261 15	19,643 29	1,918 64	21,561 93	28,050 03	6,488 10
San Diego-----	17,384 38	1,899 07	1,196 34	56 75	20,536 54	911 45	31,719 99	31,719 99	10,271 18
San Francisco--	557,437 22	145,304 70	3,000 00	---	705,741 92	161,365 63	867,107 55	{ 798,543 93 * 68,563 62 }	---
San Joaquin---	74,895 28	12,886 49	4,429 73	141 85	92,353 25	7,087 53	100,040 78	119,543 96	19,503 18
San Luis Obispo	20,283 64	2,345 16	831 09	133 63	23,503 52	1,241 25	24,534 77	34,194 01	9,359 24
San Mateo-----	22,972 27	6,399 73	647 09	100 48	30,119 57	6,009 15	36,128 72	49,225 25	13,096 53
Santa Barbara--	18,092 75	5,228 64	332 88	211 62	24,165 89	5,549 00	29,714 89	40,530 32	10,815 43
Santa Clara---	77,546 25	14,429 93	2,200 97	1,136 61	95,333 76	36,396 65	131,930 41	156,454 40	24,523 99
Santa Cruz-----	29,575 27	7,975 16	953 75	146 95	38,651 13	23,046 17	61,697 30	77,376 60	15,679 30
Shasta-----	17,715 75	1,403 18	305 67	52 75	19,477 35	719 68	20,197 03	26,473 53	6,276 50
Sierra-----	13,642 50	1,090 68	368 00	40 00	15,141 18	2,113 66	17,254 84	23,457 46	6,202 62
Siskiyou-----	20,477 57	2,265 35	920 28	853 07	24,516 27	4,093 54	28,609 81	32,991 43	4,331 62
Solano-----	54,143 31	9,467 11	1,675 92	304 97	65,591 31	10,332 63	75,923 94	84,623 24	8,699 30
Sonoma-----	75,320 78	8,400 63	2,185 35	408 06	86,314 82	7,137 18	93,452 00	115,491 00	22,039 00
Stanislaus-----	24,993 65	4,264 46	878 75	64 25	29,991 11	242 02	30,143 13	39,986 85	9,863 72
Sutter-----	21,297 55	3,377 60	550 08	375 31	25,600 54	2,383 88	27,984 42	33,118 00	7,133 58
Tehama-----	16,493 10	3,605 56	692 91	47 50	20,839 07	591 46	21,430 53	26,101 11	4,670 58
Trinity-----	7,888 00	1,026 63	251 29	107 45	9,273 37	161 00	9,434 37	13,532 17	4,097 80
Tulare-----	32,830 16	4,523 18	1,406 72	161 75	38,921 81	4,188 63	43,110 44	49,343 43	6,232 99
Tuolumne-----	14,585 65	2,370 79	733 59	131 10	17,823 13	2,355 07	20,378 20	24,327 75	3,919 55
Ventura-----	10,317 89	1,926 41	279 21	99 00	12,622 51	2,971 38	15,593 89	21,337 98	5,744 09
Yolo-----	29,441 06	3,212 93	693 95	48 00	33,395 94	2,652 42	36,048 36	42,896 52	6,348 16
Yuba-----	29,451 96	3,840 99	922 01	310 44	34,652 40	824 21	35,349 61	41,279 32	8,929 71
Totals-----	\$1,983,939 96	\$374,222 49	\$48,757 50	\$10,974 66	\$2,417,894 61	\$440,706 37	\$2,858,600 98	\$3,371,168 27	\$512,507 39

* Deficit, \$68,563 62.

TABLE No. 4—Continued.
Financial statistics, showing school expenditures for the school year ending June 30th, 1877.

COUNTIES.	Amount Paid for Teachers' Salaries	Amount Paid for Rent, Repairs, Fuel, and Contingent Expenses.	Amount Paid for School Libraries.	Amount Paid for School Apparatus.	Total Current Expenses	Amount Paid for Sites, Buildings, and Furniture	Total Expenditures.	Total Receipts	Balance on hand at Close of School Year
Alameda	\$141,661 13	\$39,609 15	\$1,777 36	\$441 53	\$183,489 17	\$2,385 91	\$213,875 08	\$264,159 49	\$18,284 41
Alpine	2,492 72	185 67	33 75		2,712 14		2,712 14	4,298 91	1,496 77
Amador	23,427 78	2,551 54	373 56		26,352 88	504 65	26,857 53	30,410 02	3,552 49
Butte	39,239 69	3,852 26	746 19	230 50	44,128 64	7,726 08	51,854 72	66,325 25	14,470 53
Calaveras	19,668 94	1,302 66	209 70	282 61	21,463 91	665 00	22,128 91	27,397 26	5,268 35
Colusa	30,328 80	6,044 71	499 00	564 69	37,437 20	225 00	37,662 20	44,437 66	6,775 46
Contra Costa	34,839 04	5,402 39	1,607 19	68 25	41,916 87	6,762 01	48,678 88	63,882 24	15,203 36
Del Norte	4,630 00	522 48	302 25	25 80	5,480 53	540 10	6,026 63	6,586 07	565 44
El Dorado	22,682 67	3,195 27	841 96	69 15	26,789 59	1,337 00	28,126 05	36,639 36	8,513 31
Fresno	22,574 12	2,504 18	777 26	533 26	26,388 82	426 32	26,815 14	30,695 68	3,790 54
Humboldt	35,876 63	5,226 08	1,563 83	283 65	42,950 19	809 65	43,759 84	63,942 38	20,182 54
Kern	5,962 83	408 69	119 44		6,490 96		6,490 96	7,620 78	1,129 82
Lake	14,442 00	2,310 44	439 77	125 09	17,317 30	6,039 53	23,356 83	28,298 19	4,941 36
Laason	16,529 81	1,332 37	732 53	75 10	18,669 81	6,665 36	25,335 17	29,762 57	4,427 40
Los Angeles	8,510 75	1,173 61	376 41	289 89	10,350 66	479 66	10,830 32	12,995 30	2,164 98
Marin	74,494 78	12,760 99	2,334 04	646 07	90,235 88	37,304 33	127,540 21	163,455 66	35,915 45
Mariposa	20,962 07	2,954 70	921 61	57 87	24,896 25	1,225 48	26,121 73	36,398 32	10,276 59
Merced	11,380 58	798 24	734 01	20 75	12,933 58	401 70	13,335 28	15,862 22	2,526 91
Modoc	33,255 60	4,170 94	1,533 41	958 08	39,918 03	1,676 05	41,594 08	54,027 84	12,433 76
Mono	16,414 90	2,068 02	775 19		19,258 11	1,084 01	20,342 12	25,420 01	5,077 89
Monterey	9,558 57	653 34	927 36	314 76	11,454 03		11,454 03	13,069 21	1,455 18
Napa	2,247 02	314 25			2,561 27	653 55	3,214 82	3,755 36	540 54
Nevada	33,873 22	5,057 24	1,615 65	122 28	40,668 39	498 60	41,166 99	46,605 13	5,438 14
Placer	29,875 26	4,952 81	1,372 84	306 85	36,507 86	1,515 51	38,023 40	51,181 51	13,161 11
Plumas	50,628 42	11,274 35	1,491 97	138 67	63,536 41	3,891 00	67,427 41	88,622 63	21,175 22
	29,993 54	4,232 62	1,170 29	428 48	35,824 93	4,876 32	40,701 25	51,521 45	10,820 20
	14,094 70	1,307 22	482 99	65 60	16,113 91	2,009 01	18,122 92	23,551 55	5,428 63

Sacramento	84,083 00	32,003 93	1,612 45	-----	117,789 38	17,006 10	134,795 48	170,957 26	36,161 78
San Benito	15,108 38	2,061 05	685 80	87 89	17,943 12	1,462 22	19,403 24	22,694 24	3,288 90
San Bernardino	17,464 46	870 20	870 20	216 52	20,499 62	3,513 25	24,012 87	26,986 56	6,970 52
San Diego	19,338 85	1,976 93	565 54	111 41	21,992 73	966 29	22,959 02	22,070 56	9,111 54
San Francisco	599,388 76	107,956 14	3,500 00	-----	710,844 90	21,479 27	732,324 17	{ 874,031 56 * 68,584 60 }	141,707 39
San Joaquin	66,797 14	12,090 44	2,465 81	33 40	81,386 79	6,253 52	87,640 31	125,072 41	37,432 10
San Luis Obispo	21,862 42	2,207 56	1,034 13	63 75	25,167 86	14,950 12	40,117 98	46,067 25	5,949 27
San Mateo	26,352 70	4,295 29	830 81	481 53	31,960 33	2,343 17	34,303 50	48,561 69	14,258 19
Santa Barbara	21,097 82	6,291 37	733 70	118 00	28,300 89	10,686 70	38,987 59	51,645 75	12,658 16
Santa Clara	93,304 45	31,101 97	2,602 27	1,106 58	128,115 27	20,183 90	154,299 17	176,194 33	21,895 16
Santa Cruz	39,055 41	7,216 15	934 61	-----	47,296 17	15,089 78	62,295 95	82,754 81	20,458 86
Shasta	17,455 34	1,504 34	1,220 27	-----	20,179 95	1,115 93	21,295 88	27,831 82	6,535 94
Sierra	14,371 00	886 54	1,017 27	-----	16,474 81	1,968 72	18,370 95	25,109 15	6,538 20
Sliskiyou	21,221 42	2,471 05	865 22	292 00	24,849 69	860 44	25,710 13	31,110 25	5,400 12
Solano	48,774 81	4,501 34	1,388 14	7,922 63	62,886 92	1,630 43	64,217 35	81,891 86	17,074 51
Sonoma	79,049 99	8,291 15	2,807 44	404 30	90,612 88	6,970 22	97,583 10	118,202 36	20,619 26
Stanislaus	24,543 47	3,199 93	1,342 15	55 00	29,140 55	715 56	29,856 11	37,845 71	7,989 60
Sutter	21,339 35	2,771 84	616 07	526 11	25,453 37	2,097 21	27,550 58	33,747 57	6,196 99
Tehama	19,068 59	3,210 52	846 59	284 63	23,410 33	188 40	23,598 73	28,807 68	5,208 95
Trinity	8,554 00	670 75	397 73	105 00	9,727 48	347 00	10,074 48	14,960 47	4,885 99
Tulare	38,716 69	3,765 93	1,670 57	486 48	44,639 67	6,254 18	50,893 85	57,054 72	6,160 87
Tuolumne	15,318 01	1,602 61	545 33	21 75	17,487 70	21 00	17,508 70	23,148 31	5,639 61
Ventura	12,553 05	1,972 75	329 83	274 04	15,129 67	2,555 41	17,685 08	25,757 93	8,072 85
Yolo	33,381 81	4,593 79	1,524 82	70 85	39,371 27	2,773 97	42,345 24	48,716 35	6,371 09
Yuba	31,029 11	3,906 47	919 32	173 39	36,028 29	294 78	36,323 07	45,487 65	9,164 58
Totals	\$2,140,435 70	\$378,754 50	\$55,148 64	\$18,964 19	\$2,602,303 03	\$147,426 43	\$2,749,729 46	\$3,610,163 35	\$860,433 89

* Reported as outstanding warrants of last year.

TABLE No. 4—Continued.

COUNTIES.	1876.				1877.			
	Cash drawn from unapportioned County Fund for County Institute-----	Cash drawn from unapportioned County Fund for Board of Examination-----	Cash drawn from unapportioned County Fund for postage, stationery, etc.-----	Total expenditure from unapportioned County Fund-----	Cash drawn from unapportioned County Fund for County Institute-----	Cash drawn from unapportioned County Fund for Board of Examination-----	Cash drawn from unapportioned County Fund for postage and stationery-----	Total expenditures from unapportioned County Fund-----
Alameda-----	\$95 00	\$595 20	\$43 88	\$733 08	None held.	\$647 60	\$43 35	\$690 95
Alpine-----	-----	91 00	50 00	141 00	\$100 00	67 80	10 00	77 80
Amador-----	-----	272 00	30 00	302 00	100 00	280 00	60 00	440 00
Butte-----	-----	229 00	55 00	284 00	100 00	212 00	70 00	382 00
Calaveras-----	20 00	195 00	302 20	517 20	100 00	245 00	262 35	607 35
Colusa-----	96 50	287 50	50 00	434 00	38 00	256 00	70 00	364 00
Contra Costa-----	-----	264 00	35 00	299 00	-----	222 18	277 78	332 78
Del Norte-----	-----	122 25	49 97	172 22	-----	91 00	5 20	96 20
El Dorado-----	30 00	188 00	-----	218 00	85 00	194 00	7 75	286 75
Fresno-----	15 00	376 50	33 00	424 50	90 00	424 88	39 00	553 88
Humboldt-----	10 50	298 75	114 50	423 75	100 00	351 50	42 00	493 50
Inyo-----	-----	-----	9 00	9 00	-----	-----	10 00	10 00
Kern-----	-----	360 00	35 00	395 00	-----	300 00	18 00	318 00
Lake-----	63 50	257 62	26 00	347 12	67 00	291 95	25 00	383 95
Lassen-----	-----	75 50	27 00	102 50	-----	140 50	20 00	160 50
Los Angeles-----	-----	350 00	240 00	690 00	100 00	360 00	450 55	910 55
Marin-----	100 00	346 65	170 97	617 62	50 00	341 60	227 28	618 88
Mariposa-----	-----	189 75	58 86	248 61	-----	252 50	50 15	302 65
Mendocino-----	70 00	134 75	37 50	242 25	85 00	212 00	61 00	358 00
Merced-----	-----	158 50	58 06	216 56	40 00	141 00	10 10	191 10
Modoc-----	-----	-----	-----	-----	21 50	234 50	10 75	266 75
Mono-----	-----	367 75	270 79	270 79	100 00	411 90	111 60	623 50
Monterey-----	100 00	-----	98 93	566 68	-----	-----	-----	-----

Napa	85 00	300 00	43 00	428 00	100 00	277 50	83 25	460 75
Nevada	100 00	120 00	43 00	263 00	95 00	163 12	199 00	362 12
Placer	20 00	340 50	67 00	427 50	27 00	396 00	20 00	443 00
Plumas	32 85	79 50	73 43	184 78	100 00	178 00	62 75	340 75
Sacramento	100 00	420 00	126 59	646 59	100 00	460 00	212 00	772 00
San Benito		240 00	35 00	275 00		191 25	47 10	238 35
San Bernardino		178 00	23 00	201 00	77 05	192 00	69 23	338 28
San Diego		126 00	23 80	149 80	100 00	30 00	31 26	161 26
San Francisco								
San Joaquin		200 00	70 00	270 00		200 00	95 00	295 00
San Luis Obispo	20 50	367 75	70 50	438 75	100 00	318 25	59 00	477 25
San Mateo		238 00	27 00	265 00	73 00	235 00	62 50	370 50
Santa Barbara		142 00	49 25	191 25		192 00	20 00	212 00
Santa Clara	120 00	748 00	60 00	928 00	56 50	520 00	60 00	636 50
Santa Cruz	100 00	182 00	61 87	343 87	100 00	240 00	83 00	423 00
Shasta		295 45	52 35	347 80	100 00	295 00	38 75	433 75
Sierra		199 50	50 00	249 50		157 80		157 80
Siskiyou	100 00	192 00	19 60	311 60	100 00	192 00	47 50	339 50
Solano	100 00	290 00	50 00	440 00	10 00	280 00	50 00	340 00
Sonoma	100 00	340 00	93 00	533 00	100 00	400 00	100 00	600 00
Stanislaus	100 00	370 00	93 05	563 05	100 00	300 00	15 75	415 75
Sutter	30 50	235 00	36 00	301 50	75 00	222 75	48 50	346 25
Tehama	100 00	242 97	66 65	409 62	100 00	247 75	50 00	397 75
Trinity		23 00	17 75	40 75			13 00	13 00
Tulare	40 00	293 50	53 00	386 50	96 50	364 25	198 50	659 25
Tuolumne		212 90	15 00	227 90	8 00	144 00	26 00	178 00
Ventura		220 00	37 45	257 45		300 60	53 14	353 64
Yolo	96 00	220 00	40 00	356 00	75 00	210 00	40 00	325 00
Yuba	30 50	228 50	57 60	316 60	78 25	217 70	61 54	357 49
Totals	\$1,975 85	\$12,204 29	\$3,248 55	\$17,428 95	\$2,817 80	\$12,602 88	\$3,728 63	\$19,179 31

TABLE NO. 5.

Valuation of school property, 1876.

COUNTIES.	1876.				1877.			
	Valuation of Lots School Houses and Furniture-----	Valuation of School Libraries-----	Valuation of School Apparatus-----	Total Valuation of School Property-----	Valuation of Lots, School Houses and Furniture-----	Valuation of School Libraries-----	Valuation of School Apparatus-----	Total Valuation of School Property-----
Alameda-----	\$397,050 00	\$5,912 00	\$2,675 00	\$405,637 00	\$427,690 00	\$9,082 00	\$4,047 00	\$440,819 00
Alpine-----	600 00	105 15	72 56	777 71	1,031 50	193 50	75 00	1,300 00
Anaador-----	26,330 00	1,763 00	1,065 00	29,158 00	25,300 00	2,104 00	1,213 00	28,617 00
Butte-----	91,128 30	4,051 47	2,824 50	98,004 27	91,770 00	4,923 00	4,605 00	101,298 00
Calaveras-----	21,350 00	1,491 00	1,200 00	24,041 00	21,710 00	1,470 00	1,640 00	24,820 00
Colusa-----	42,114 50	3,255 68	1,661 00	47,031 18	43,390 00	3,785 00	1,939 00	49,314 00
Contra Costa-----	53,738 50	4,400 10	1,059 00	59,197 60	58,555 00	5,305 00	1,795 00	65,655 00
Del Norte-----	6,773 12	426 47	234 75	7,434 34	7,050 00	656 00	255 00	7,961 00
El Dorado-----	29,000 16	5,087 12	1,778 49	35,865 77	29,386 00	5,411 00	2,025 00	36,822 00
Fresno-----	23,463 00	1,951 75	1,018 50	26,433 25	18,310 00	3,200 00	1,411 00	22,921 00
Humboldt-----	36,550 00	3,540 10	1,440 00	41,510 10	41,500 00	4,853 00	1,440 00	47,793 00
Inyo-----	7,812 00	816 31	235 45	8,863 76	7,612 00	899 00	437 00	8,948 00
Kern-----	16,742 00	890 63	395 00	18,027 63	18,906 00	1,410 10	508 90	20,825 00
Lake-----	12,010 50	1,871 00	576 50	14,458 00	20,595 00	2,702 00	791 00	24,088 00
Lassen-----	8,875 00	582 00	305 00	9,762 00	8,900 00	984 00	605 00	10,489 00
Los Angeles-----	138,125 00	8,190 00	2,920 00	149,235 00	176,900 00	10,350 00	3,875 00	191,125 00
Marin-----	39,565 00	3,310 00	942 00	43,817 00	38,700 00	4,319 00	947 00	43,966 00
Mariposa-----	9,017 75	1,350 50	777 00	10,145 25	6,765 00	1,431 00	697 00	8,893 00

Mendocino	35,479 00	3,524 00	1,465 00	40,468 00	38,585 00	4,315 20	2,252 61	45,152 81
Merced	44,019 00	2,972 86	984 79	47,376 65	44,985 00	3,098 00	1,090 00	49,173 00
Modoc	10,530 00	1,040 00	597 50	12,487 50	6,082 90	930 25	556 75	7,569 90
Mono	3,900 00	68 00	50 00	4,018 00	5,716 00	75 00	68 00	5,859 00
Monterey	41,509 20	3,734 89	975 75	46,219 84	43,391 55	5,177 78	1,016 50	49,885 83
Napa	63,070 00	4,149 85	1,716 50	68,936 35	65,145 00	5,317 00	2,042 00	72,504 00
Nevada	106,542 00	7,776 50	2,511 00	116,829 50	113,783 00	9,612 00	2,686 00	125,481 00
Placer	46,398 25	3,376 00	1,206 29	51,180 54	45,600 00	3,987 00	1,412 00	50,999 00
Plumas	11,735 46	1,679 70	885 52	14,300 68	17,915 00	2,170 00	997 00	21,982 00
Sacramento	238,217 60	5,654 55	2,530 12	246,402 27	260,100 00	11,020 00	4,440 00	275,560 00
San Benito	23,885 00	1,151 88	378 30	27,415 18	26,430 00	1,692 00	515 00	28,637 00
San Bernardino	20,255 75	2,793 80	621 13	23,670 68	23,675 00	2,825 00	677 00	27,177 00
San Diego	13,092 47	1,694 95	473 20	15,260 62	12,172 00	1,944 00	406 00	14,522 00
San Francisco	2,475,000 00	10,500 00	20,000 00	2,505,500 00	2,500,000 00	11,000 00	24,000 00	2,585,000 00
San Joaquin	225,100 00	8,790 00	2,500 00	236,390 00	231,350 00	9,527 00	3,160 00	244,037 00
San Luis Obispo	11,420 00	2,667 00	1,567 00	15,654 00	27,800 00	3,195 00	2,265 00	33,260 00
San Mateo	58,175 00	4,177 70	1,216 60	63,569 30	55,461 00	4,598 00	1,570 00	61,629 00
Santa Barbara	52,653 00	1,042 10	803 00	55,098 10	53,501 00	2,100 00	540 00	57,141 00
Santa Clara	264,305 00	8,905 15	8,516 50	281,726 65	306,585 00	11,396 00	8,712 00	326,693 00
Santa Cruz	69,800 00	4,410 00	1,224 00	75,434 00	84,740 00	5,072 00	1,343 00	91,155 00
Shasta	12,245 00	2,745 75	771 25	15,762 00	16,145 00	3,754 00	1,254 00	21,153 00
Sierra	8,350 00	2,055 00	690 00	11,095 00	9,975 00	3,080 00	560 00	13,615 00
Siskiyou	29,150 00	2,060 00	1,495 00	32,705 00	28,515 00	2,765 00	1,745 00	33,025 00
Solano	102,435 00	6,184 30	2,369 00	110,988 30	101,175 00	6,687 00	3,470 00	111,332 00
Sonoma	147,650 00	10,090 00	3,671 00	161,411 00	156,900 00	12,901 60	3,597 50	173,999 10
Stanislaus	51,022 00	3,118 81	930 98	55,071 78	41,661 00	3,818 00	832 00	46,311 00
Sutter	31,103 00	1,262 00	1,179 00	33,544 00	36,373 00	1,685 00	1,725 00	39,783 00
Tehama	28,884 50	1,954 00	797 50	31,636 00	33,410 00	2,762 00	1,063 00	37,235 00
Trinity	5,516 00	1,166 50	245 00	6,927 50	5,400 00	1,713 00	365 00	7,478 00
Tulare	29,751 40	2,439 40	887 00	33,077 80	30,473 00	3,374 00	1,435 00	35,539 00
Tuolumne	21,300 00	5,295 00	1,115 50	25,710 50	20,315 00	3,451 00	639 00	24,405 00
Ventura	20,500 00	1,420 00	310 00	28,230 00	27,400 00	1,890 00	505 00	29,795 00
Yolo	51,465 00	2,489 00	940 25	54,794 25	55,075 00	2,949 00	1,030 00	59,054 00
Yuba	48,080 00	3,630 92	1,496 00	53,206 92	47,555 00	4,985 00	1,708 00	54,248 00
Totals	\$5,369,983 46	\$173,213 09	\$88,299 43	\$5,631,495 98	\$5,617,916 95	\$207,336 43	\$107,990 26	\$5,933,243 64

TABLE No. 6.

Statement by counties of apportionment of Public School Fund for school years ending June 30th., 1876 and 1877.

COUNTIES.	SEMI-ANNUAL.		Total for 1876-----	SEMI-ANNUAL.		Total for 1877-----
	August, 1875--	February, 1876--		August, 1876----	February, 1877--	
Alameda	\$11,382 60	\$60,271 80	\$71,654 40	\$14,191 36	\$74,282 90	88,474 26
Alpine	103 70	549 10	652 80	108 80	569 50	678 30
Anaador	2,904 82	15,381 26	18,286 08	3,165 44	16,569 10	19,734 54
Butte	4,250 48	22,506 64	26,757 12	4,586 24	24,006 10	28,592 34
Calaveras	2,703 52	14,315 36	17,018 88	2,717 44	14,224 10	16,941 54
Colusa	2,862 12	15,155 16	18,017 28	3,106 56	16,260 90	19,367 46
Contra Costa	3,717 34	19,683 62	23,400 96	4,094 72	21,433 30	25,528 02
Del Norte	546 56	2,894 08	3,440 64	560 64	2,934 60	3,495 24
El Dorado	2,848 70	15,084 10	17,932 80	3,082 24	16,133 60	19,215 84
Fresno	1,705 56	9,031 08	10,736 64	2,008 32	10,512 30	12,520 60
Humboldt	3,492 86	18,494 98	21,987 84	4,180 48	21,882 20	26,062 68
Inyo	484 34	2,564 62	3,048 96	462 08	2,418 70	2,880 78
Kern	1,216 34	6,440 62	7,656 96	1,401 60	7,336 50	8,738 10
Lake	1,670 18	8,843 74	10,513 92	1,914 88	10,023 20	11,938 08
Lassen	813 74	4,308 82	5,122 56	812 80	4,254 50	5,067 30
Los Angeles	9,500 14	50,304 02	59,804 16	11,928 32	62,437 30	74,365 62
Marin	2,009 34	10,639 62	12,648 96	2,270 72	11,885 80	14,156 52
Mariposa	1,134 60	6,007 80	7,142 40	1,157 12	6,056 80	7,213 92
Mendocino	3,425 76	18,139 68	21,565 44	3,872 00	20,267 50	24,139 50
Merced	1,428 62	7,564 66	8,993 28	1,505 28	7,879 20	9,384 48
Modoc	1,032 12	5,465 16	6,497 28	994 56	5,205 90	6,200 46
Mono	136 64	723 52	860 16	160 00	837 50	997 50
Monterey	21,227 56	21,227 56	25,236 48	4,225 28	22,116 70	26,341 98
Napa	3,442 84	18,230 12	21,672 96	3,737 60	19,564 90	23,301 60
Nevada	5,740 10	30,394 30	36,134 40	6,069 76	31,771 40	37,841 16

Placer	3,073 18	16,272 74	19,345 92	3,258 88	17,058 20	20,317 08
Plumas	1,017 48	5,387 64	6,405 12	1,104 04	5,782 10	6,886 74
Sacramento	7,908 04	41,873 72	49,771 76	8,344 32	43,677 30	52,021 62
San Benito	1,776 32	9,405 76	11,182 08	1,962 24	10,271 10	12,233 34
San Bernardino	2,404 62	12,732 66	15,137 28	2,693 12	14,096 80	16,789 92
San Diego	2,237 48	11,847 64	14,055 12	2,133 76	11,168 90	13,302 66
San Francisco	50,045 62	204,995 66	315,041 28	59,184 64	309,794 60	368,979 24
San Joaquin	6,558 64	33,669 52	40,028 16	6,650 88	34,813 20	41,464 08
San Luis Obispo	2,454 64	12,997 52	15,452 16	2,905 60	15,209 00	18,114 60
San Mateo	2,854 80	15,116 40	17,971 20	3,202 56	16,763 40	19,965 96
Santa Barbara	2,784 04	14,741 72	17,525 76	3,463 68	18,130 20	21,593 88
Santa Clara	10,260 20	54,328 60	64,588 80	11,395 84	59,650 10	71,045 94
Santa Cruz	3,918 64	20,749 52	24,668 16	4,323 84	22,632 60	26,956 44
Shasta	1,850 74	9,799 82	11,650 56	2,069 76	10,833 90	12,903 66
Sierra	1,360 30	7,202 90	8,563 20	1,415 68	7,410 20	8,825 88
Siskiyou	2,080 10	11,014 30	13,094 40	2,265 60	11,859 00	14,121 60
Solano	5,648 60	29,909 80	35,538 40	5,744 64	30,969 60	35,814 24
Sonoma	8,543 66	45,239 38	53,783 04	9,450 24	49,466 10	58,916 34
Stanislaus	2,328 98	12,332 14	14,661 12	2,479 36	12,977 90	15,457 26
Sutter	1,889 78	10,006 54	11,896 32	2,018 56	10,565 90	12,584 46
Tehama	1,738 50	9,205 50	10,944 00	2,081 28	10,894 20	12,975 48
Trinity	783 24	4,147 32	4,930 56	853 76	4,468 90	5,322 66
Tulare	3,461 14	18,237 02	21,788 16	4,011 52	20,997 80	25,009 32
Tuolumne	2,283 84	12,093 12	14,376 96	2,336 00	12,227 50	14,563 80
Ventura	1,368 84	7,248 12	8,616 96	1,694 72	8,870 80	10,565 52
Yolo	3,130 52	16,576 36	19,706 88	3,685 12	19,289 304	22,974 42
Yuba	3,182 98	16,854 14	20,937 12	3,482 88	18,230 70	21,713 58
Totals	\$209,306 86	\$1,108,296 98	\$1,317,603 84	\$236,527 36	\$1,238,072 90	\$1,474,600 26

TABLE No. 7.

Statistical table by years, showing the total expenditures for Public Schools in the State of California, from 1852 to 1877, the assessable property of the State, and the percentage of expenditures on taxable property.

YEARS.	Assessed Value of Property	YEARS.	Total Expendi- tures	Rate per each \$100 00-----
1850-51-----	\$57,670,689 00	1851-52-----	\$33,449 00	.0679
1851-2-----	49,231,052 00	1852-3-----	65,645 00	.1016
1852-3-----	64,579,375 00	1853-4-----	275,606 00	.2890
1853-4-----	95,335,646 00	1854-5-----	334,638 00	.3009
1854-5-----	111,191,630 00	1855-6-----	305,221 00	.2938
1855-6-----	103,887,193 55	1856-7-----	307,832 00	.3240
1856-7-----	95,007,440 97	1857-8-----	339,914 00	.2696
1857-8-----	126,059,461 82	1859-----	427,003 00	.3444
1858-9-----	123,955,877 00	1860-----	474,263 00	.3618
1859-60-----	131,060,279 49	1861-----	470,113 00	.3172
1860-61-----	148,193,540 02	1862-----	441,228 00	.2985
1861-2-----	147,811,617 16	1863-----	483,407 00	.3014
1862-3-----	160,369,071 81	1864-----	655,198 00	.3763
1863-4-----	174,104,955 07	1865-----	883,116 00	.4893
1864-5-----	180,484,949 85	1866-----	859,229 00	.4680
1865-6-----	183,509,161 00	1867-----	1,163,348 00	.5816
1866-7-----	200,764,132 50	1868-----	1,151,407 00	.5255
1867-8-----	212,205,339 01	1869-----	1,290,585 00	.5418
1868-9-----	237,483,175 07	1870-----	1,529,047 00	.5868
1869-70-----	260,563,886 08	1871-----	1,713,431 00	.6572
1870-71-----	277,538,134 97	1872-----	1,881,333 00	.7001
1871-2-----	267,868,126 76	1873-----	2,113,356 00	.3321
1872-3-----	637,232,823 31	1874-----	2,111,155 33	.3992
1873-4-----	528,747,043 00	1875-----	2,658,241 34	.4347
1874-5-----	611,495,197 00	1876-----	2,858,600 98	.4827
1875-6-----	594,230,621 00	1877-----	2,749,729 46	.4684
1876-7-----	586,980,107 00			

TABLE NO. 8.

Statement by years, showing the total amount of receipts and expenditures for Public Schools of the State of California, from 1855 to 1877, inclusive.

YEARS.	Total Amount of the State School Fund Apportioned -----	Total Amount raised by County Taxes -----	Total Amount raised from Other Sources -----
1852 -----			\$2,417 00
1853 -----			10,626 00
1854 -----	\$52,061 00	\$157,702 00	42,557 00
1855 -----	63,662 00	119,128 00	39,395 00
1856 -----	69,961 00	121,639 00	28,619 00
1857 -----	78,057 00	148,989 00	55,035 00
1858 -----	53,405 00	162,870 00	85,107 00
1859 -----	72,319 00	205,196 00	97,534 00
1860 -----	81,118 00	230,514 00	122,858 00
1861 -----	81,461 00	241,861 00	114,397 00
1862 -----	75,412 00	294,828 00	141,806 00
1863 -----	145,537 00	328,554 00	68,209 00
1864 -----	132,217 00	260,842 00	84,084 00
1865 -----	168,828 00	390,306 00	91,181 00
1866 -----	132,410 00	470,668 00	79,600 00
1867 -----	268,910 00	595,718 00	81,966 00
1868 -----	252,603 00	654,738 00	73,986 00
1869 -----	290,796 00	847,229 00	66,531 00
1870 -----	360,447 00	839,756 00	63,441 00
1871 -----	423,853 00	923,809 00	46,660 00
1872 -----	424,022 00	1,249,943 00	232,075 00
1873 -----	430,220 00	1,541,597 00	310,502 00
1874 -----	428,418 12	1,332,208 82	345,316 95
1875 -----	1,212,252 03	1,115,530 06	676,259 64
1876 -----	1,317,603 84	1,240,637 31	158,206 40
1877 -----	1,474,600 26	1,486,233 73	137,100 31
Totals -----	\$8,090,173 25	\$14,960,496 92	\$3,255,469 30

TABLE No. 8—Continued.

YEARS.	Total Amount Paid for Teachers' Sal- aries -----	Total Amount Paid for School Houses and Sites -----	Total Amount Ex- pended for School Purposes
1852 -----	\$20,707 00	\$9,775 00	\$33,449 00
1853 -----	47,894 00	6,193 00	65,645 00
1854 -----	85,860 00	129,677 00	275,606 00
1855 -----	181,906 00	76,525 00	334,638 00
1856 -----	200,941 00	52,484 00	305,221 00
1857 -----	192,613 00	59,743 00	307,832 00
1858 -----	204,545 00	88,199 00	339,914 00
1859 -----	256,777 00	90,266 00	427,003 00
1860 -----	311,165 00	110,352 00	474,263 00
1861 -----	311,501 00	101,818 00	470,113 00
1862 -----	330,249 00	49,274 00	441,238 00
1863 -----	328,338 00	93,931 00	483,407 00
1864 -----	411,101 00	167,393 00	656,198 00
1865 -----	526,585 00	237,804 00	883,116 00
1866 -----	551,462 00	185,056 00	859,229 00
1867 -----	696,110 00	238,010 00	1,163,348 00
1868 -----	763,639 00	221,118 00	1,151,407 00
1869 -----	873,814 00	205,766 00	1,290,585 00
1870 -----	976,938 00	339,362 00	1,529,047 00
1871 -----	1,103,125 00	390,158 00	1,713,431 00
1872 -----	1,282,799 00	290,119 00	1,881,333 00
1873 -----	1,434,367 00	374,069 00	2,113,356 00
1874 -----	1,560,830 00	192,467 00	2,111,155 00
1875 -----	1,810,480 00	421,279 00	2,658,241 00
1876 -----	1,983,939 96	440,706 37	2,858,600 98
1877 -----	2,149,435 70	147,426 43	2,749,729 46
Totals -----	\$18,597,221 66	\$4,538,060 80	\$27,576,105 44

TABLE No. 9.

Statistical summary, by years, of the Public Schools of California, from 1851 to 1877, inclusive.

YEARS.	Number of Children Listed by Census Marshals ----	Number of Children Enrolled on School Register -----	Average Daily Attendance --	Number of Schools -----
1851 -----	5,906	1,846	-----	49
1852 -----	17,821	3,314	-----	20
1853 -----	19,442	4,193	2,020	111
1854 -----	20,075	9,746	4,635	168
1855 -----	26,077	-----	6,442	227
1856 -----	30,039	-----	8,495	321
1857 -----	35,722	17,232	9,717	368
1858 -----	40,530	19,822	11,183	432
1859 -----	48,676	23,519	13,364	523
1860 -----	57,917	26,993	14,754	593
1861 -----	68,395	31,786	17,804	684
1862 -----	71,821	36,566	19,262	715
1863 -----	78,055	36,540	19,992	754
1864 -----	86,031	47,588	24,794	832
1865 -----	95,067	50,089	29,592	947
1866 -----	84,179	50,273	-----	913
1867 -----	94,213	62,227	-----	1,083
1868 -----	104,118	65,828	43,681	1,228
1869 -----	112,743	73,754	49,802	1,354
1870 -----	121,751	85,808	54,271	1,492
1871 -----	130,116	91,332	64,286	1,550
1872 -----	137,351	94,720	65,700	1,654
1873 -----	141,610	107,593	69,461	1,868
1874 -----	159,717	120,240	72,283	2,005
1875 -----	171,563	130,930	78,027	2,190
1876 -----	184,787	140,468	83,391	2,336
1877 -----	200,067	142,658	89,539	2,485

TABLE No. 9—Continued.

YEARS.	Number of Teach- ers-----	Number of Child- ren under Five Years of Age-----	Number of Census Children in Pri- vate Schools-----
1851-----			
1852-----			
1853-----			
1854-----	214		
1855-----	301		
1856-----	392		
1857-----	486		
1858-----	517	23,558	
1859-----	744	28,300	
1860-----	831	30,932	5,438
1861-----	932	35,334	6,306
1862-----	962	38,127	6,886
1863-----	919	39,081	9,158
1864-----	1,079	41,323	11,359
1865-----	1,155	42,733	12,478
1866-----	1,268	52,037	15,671
1867-----	1,389	52,975	14,026
1868-----	1,590	58,119	14,820
1869-----	1,687	57,983	16,273
1870-----	1,869	62,940	16,198
1871-----	2,052	66,292	15,524
1872-----	2,301	69,723	13,787
1873-----	2,336	70,086	12,507
1874-----	2,452	74,876	14,149
1875-----	2,693	78,650	15,021
1876-----	2,894	83,595	14,625
1877-----	3,077	88,951	15,344

TABLE No. 10.

Condition of the School Fund for the 27th and 28th fiscal years.

<i>Debits.</i>	
July 8, 1875—To "California Teacher"	\$3,892 50
June 30, 1876—To warrants issued to County Treasurers	1,282,544 74
June 30, 1876—To balance	215,108 36
	<u>\$1,501,545 60</u>
June 30, 1877—To warrants issued to County Treasurers	\$1,499,098 14
June 30, 1877—To balance	220,049 95
	<u>\$1,719,148 09</u>
<i>Credits.</i>	
July 1, 1875—By balance	\$162,948 15
July 2, 1875—By interest on bonds	52,005 00
November 22, 1875—By Regents State University	245 70
January 10, 1876—By interest on bonds	53,880 00
June 30, 1876—By receipts from counties	1,232,466 75
	<u>\$1,501,545 60</u>
July 1, 1876—By balance	\$215,108 36
May 14, 1877—By Regents State University	133 60
June 30, 1877—By interest on bonds { State	\$107,760 00 }
County	5,303 91 }
June 30, 1877—By receipts from counties	1,390,842 22
	<u>\$1,719,148 09</u>
July 1, 1877—By balance	\$220,049 95

TABLE No 10—Continued.

State School Land Fund.

<i>Debits.</i>	
June 30, 1876—To warrants issued	\$7,551 12
June 30, 1876—To balance	124,314 93
	<u>\$131,866 05</u>
June 30, 1877—To warrants issued	\$150,137 99
June 30, 1877—To balance	68,064 16
	<u>\$218,202 15</u>
<i>Credits.</i>	
July 1, 1875—By balance	\$30,644 80
June 30, 1876—By receipts from counties	101,221 25
	<u>\$131,866 05</u>
July 1, 1876—By balance	\$124,314 93
July 14, 1876—By warrants canceled	55 68
April 23, 1877—By W. J. Curtis, money refunded	17 00
June 30, 1877—By receipts from counties	93,814 54
	<u>\$218,202 15</u>
July 1, 1877—By balance	\$68,064 16

TABLE NO. 11.

Statement of the bonds held in trust by the State Treasurer for the School Fund.

BONDS.	Amount.
State Capitol Bonds of 1870, 7 per cent.	\$236,000 00
State Capitol Bonds of 1872, 7 per cent.	115,000 00
Bonds of 1873, 6 per cent.	1,386,500 00
Humboldt County Bonds, 9 per cent.	25,000 00
Lake County Bonds, 7 per cent.	11,400 00
Mendocino County Bonds, 8 per cent.	10,000 00
San Joaquin County Bonds, 10 per cent.	5,000 00
San Luis Obispo County Bonds, 8 per cent.	10,000 00
San Luis Obispo County Bonds, 10 per cent.	10,000 00
Santa Barbara County Bonds, 10 per cent.	20,000 00
Tehama County Bonds, 8 per cent.	11,500 00
Tulare County Bonds, 10 per cent.	20,000 00
Total	\$1,860,400 00

[APPENDIX G.]

LIST OF HOLDERS OF STATE CERTIFICATES AND DIPLOMAS,
IN FULL FORCE AND EFFECT NOVEMBER 1, 1877.

LIFE DIPLOMAS.

NAME.	When Issued.
Abbott, Warren	November 11, 1871.
Ackleson, Susan	September 1, 1877.
Aldrich, Abbie F.	April 22, 1876.
Allen, L. D.	November 11, 1871.
Allsopp, J. P. C.	November 25, 1869.
Ames, Charles G.	November 25, 1869.
Ames, Martha	December 4, 1875.
Anderson, Anna B.	September 1, 1877.
Anderson, Mrs. C. A.	November 28, 1873.
Anderson, J. W.	December 15, 1868.
Anderson, W. H.	May 5, 1877.
Ashbrook, T. P.	May 5, 1877.
Atwood, Mrs. N. J.	May 5, 1877.
Atwood, Mrs. C. L.	November 20, 1867.
Austin, Miss Minnie F.	December 27, 1866.
Babcock, W. S.	January 29, 1876.
Bagnall, John	November 29, 1867.
Bailey, C. P.	December 15, 1868.
Baker, George F.	June 21, 1873.
Baldwin, Miss Nellie	January 5, 1875.
Bangs, Vital E.	October 26, 1877.
Barr, Miss Sara A.	November 28, 1873.
Barry, Charlotte M.	October 26, 1877.
Bassett, Jennie A.	May 5, 1877.
Batchelder, H. T.	November 28, 1873.
Baumgarten, Miss E. M.	April 22, 1876.
Beals, Mrs. C. R.	June 3, 1872.
Beamier, Emma	September 1, 1877.
Benjamin, C. V.	June 3, 1872.
Bennett, Miss Mary H.	June 22, 1872.
Bernard, Miss A. S.	January 5, 1875.
Bigham, Julia	September 1, 1877.
Black, Samuel T.	December 13, 1872.
Blake, Charles M.	June 22, 1874.
Blakely, James O.	October 26, 1877.
Bloomer, A. C.	January 29, 1876.
Bodwell, Miss Mary L.	December 27, 1866.
Bolander, H. N.	December 15, 1868.
Bonner, W. G.	September 1, 1877.
Boynton, S. S.	September 1, 1877.
Brackett, Ella L.	November 11, 1876.
Bradley, Mrs. C. P.	October 26, 1877.
Bradley, Theodore	December 27, 1866.
Bragg, Mary J.	December 4, 1875.
Brady, John H.	November 25, 1869.
Brod, A. W.	March 14, 1871.
Brophy, M. C.	May 5, 1877.
Brown, A. G.	May 5, 1877.

LIFE DIPLOMAS—Continued.

NAME.	When Issued.
Brown, F. R.	July 5, 1867.
Brown, George	December 27, 1866.
Brown, G. J.	November 11, 1876.
Brown, James B.	November 11, 1876.
Brown, Julia B.	May 5, 1877.
Brown, Miss S. L.	June 22, 1874.
Bryerly, John R.	January 29, 1876.
Buckman, F. S. S.	June 1, 1875.
Bugbey, Mrs. B. N.	January 29, 1876.
Bunnell, Geo. W.	December 27, 1866.
Burke, Lizzie K.	November 28, 1873.
Byrod, Sarah J.	May 5, 1877.
Call, Mattie C.	November 11, 1876.
Campbell, Miss A. T.	November 11, 1876.
Campbell, Miss C. C.	December 13, 1872.
Campbell, F. A.	November 28, 1873.
Carlton, H. P.	June 8, 1866.
Carr, Ezra S.	May 5, 1877.
Casebolt, Miss M. A.	June 3, 1872.
Castelhun, Miss Maria A.	June 22, 1874.
Chalmers, Annie B.	January 5, 1875.
Chapman, Annie B.	June 3, 1872.
Chestnutwood, John A.	February 17, 1873.
Chestnutwood, Mrs. J. A.	December 4, 1875.
Childs, C. W.	May 27, 1868.
Chipman, L. J.	May 5, 1877.
Ciprico, Anita C.	May 5, 1877.
Clapp, Mrs. L. K.	December 15, 1868.
Clark, Dorcas	November 29, 1867.
Clark, H. J.	October 26, 1877.
Clark, Mary E.	November 29, 1867.
Clark, Miss H. M.	December 27, 1866.
Clark, L. R.	July 12, 1870.
Clark, M. C.	June 1, 1875.
Cleveland, Miss E. A.	June 3, 1873.
Coe, Eli G.	March 14, 1871.
Coleman, Mrs. D. M.	October 26, 1877.
Collier, Mrs. J. W.	September 1, 1877.
Conklin, E. B.	March 14, 1871.
Cook, Mrs. P.	March 9, 1870.
Cook, Miss Hannah	November 28, 1873.
Cottle, Melville	May 21, 1869.
Cox, Kate M.	September 1, 1877.
Crane, Amanda	April 22, 1876.
Craven, Andrew F.	June 22, 1874.
Crawford, Mrs. J. F.	June 22, 1874.
Crawford, T. O.	December 4, 1875.
Cressy, E. M.	October 26, 1877.
Cross, C. W.	January 5, 1875.
Crossett, F. M.	January 29, 1876.
Crowell, C. H.	February 17, 1873.
Crowhurst, William	June 1, 1875.
Cummings, C. C.	December 27, 1866.
Curtis, H. C.	September 1, 1877.
D'Arey, Miss M. E.	December 13, 1872.
David, Mrs. Alice	October 26, 1877.
Davidson, R. P.	October 26, 1877.
Davis, Imogene W.	January 5, 1875.
Davis, J. T.	April 22, 1876.
Deane, Mrs. M.	June 13, 1871.
Deekin, Mrs. Lizzie G.	June 22, 1874.
Denman, James	December 27, 1866.
Dodge, W. C.	June 22, 1874.
Dooner, John	January 5, 1875.
Drake, A. J.	March 14, 1871.

LIFE DIPLOMAS—Continued.

NAME.	When Issued.
Drake, Charles M.	January 29, 1876.
Duaue, Mrs. A. S.	June 3, 1872.
DuBois, Mrs. A. E.	December 15, 1868.
DuBois, J. B.	January 29, 1876.
Duenkle, Wm.	December 4, 1875.
Dunbar, Annie S.	November 11, 1876.
Dunbar, S. G. S.	November 11, 1876.
Dunbar, Vilette J.	May 5, 1877.
Duncan, Annie	May 5, 1877.
Duncan, Elizabeth	May 5, 1877.
Eickhoff, J. Henry	November 28, 1873.
Ellis, Carrie M.	November 14, 1876.
Ellis, Miss M. C.	September 1, 1877.
Fairchild, H. M.	May 5, 1877.
Fallon, J. K.	September 1, 1877.
Farley, A. J.	December 13, 1872.
Fellers, Lorenzo	May 5, 1877.
Felts, J. M.	September 1, 1877.
Fenton, H. W.	May 5, 1877.
Field, Miss Carrie P.	June 1, 1875.
Finch, J. B.	November 11, 1871.
Fink, Augusta P.	December 4, 1875.
Fisk, Julia A.	January 29, 1876.
Fitzgerald, A. L.	November 11, 1871.
Flint, Almira	November 11, 1876.
Folger, Sarah J.	May 5, 1877.
Fonda, Charles E.	May 5, 1877.
Foster, Mrs. Emily	June 22, 1874.
Foster, Mrs. J. A.	November 28, 1873.
Fowler, B. F.	November 11, 1877.
Fowler, Laura T.	December 15, 1868.
Freman, G. N.	January 5, 1875.
Fry, W. H.	December 13, 1872.
Fuller, A. L.	November 25, 1869.
Furlong, George	January 29, 1876.
Gabriel, Mrs. C. E.	June 22, 1874.
Gavin, Paul A.	November 11, 1876.
Garrison, Gazena	January 29, 1876.
Gates, Freman	December 13, 1872.
Gates, Mrs. S. B.	September 1, 1877.
Gibson, J. C.	September 1, 1877.
Goldsmith, Esther	October 26, 1877.
Gorman, W. J.	February 17, 1873.
Goodrich, A. H.	June 20, 1868.
Gourley, Miss Jennie	September 1, 1877.
Graf, Miss Minnie	December 13, 1872.
Granger, W. N.	May 2, 1868.
Grant, Miss Ella G.	January 5, 1875.
Grant, Miss Helen A.	June 5, 1875.
Gray, Miss A. L.	September 1, 1877.
Gray, John C.	May 21, 1869.
Greer, Miss Jane E.	June 1, 1875.
Griffin, Charles R.	September 1, 1877.
Griffin, Martha E.	September 1, 1877.
Griffith, Miss Aurelia	March 14, 1874.
Gunn, Miss S. M.	June 1, 1875.
Guinn, James M.	November 11, 1871.
Haley, W. T.	September 1, 1877.
Hall, Miss Frances M.	April 22, 1876.
Hall, George C.	October 26, 1877.
Hamilton, Miss Addie	November 28, 1873.
Hammond, Josiah Shaw	November 28, 1873.
Hapgood, Mrs. Emma	September 1, 1877.
Harlan, James	September 24, 1867.
Hart, W. C.	February 17, 1873.

LIFE DIPLOMAS—Continued.

NAME.	When Issued.
Hatch, Junius L.	December 4, 1875.
Havens, Carrie	May 5, 1877.
Hays, Mrs. A. M. W.	September 1, 1877.
Hayes, John	January 29, 1876.
Henning, Irving P.	June 1, 1875.
Herbst, A.	May 5, 1877.
Hewitt, Roscoe E.	June 1, 1875.
Higby, H. C.	February 17, 1873.
Hill, Miss A. H.	March 14, 1871.
Hill, Whitman H.	May 5, 1877.
Hilton, Stephen	October 26, 1877.
Hobbs, W. H.	December 13, 1872.
Hodgdon, Miss S. J.	November 28, 1873.
Hoffman, Mrs. Mary L.	May 5, 1877.
Hogan, Miss M. J.	December 27, 1866.
Hoitt, Ira G.	December 27, 1866.
Holbrook, T. W. J.	November 11, 1871.
Holder, W. W.	December 27, 1866.
Holmes, Alvira	September 1, 1877.
Holmes, Ada M.	December 27, 1866.
Holmes, Ellis H.	May 5, 1877.
Holton, Abba L.	May 5, 1877.
Horton, G. W.	April 22, 1876.
Houghton, Geo. E.	December 27, 1866.
Houghton, Miss E. W.	June 1, 1875.
Howe, Converse	May 27, 1868.
Howe, H. H.	September 24, 1867.
Howe, J. M.	September 1, 1877.
Howell, S. S.	January 5, 1875.
Hucks, Annie E.	February 17, 1873.
Hudson, J. A.	May 5, 1877.
Hughes, A. B.	May 27, 1868.
Humphrey, E. D.	June 22, 1874.
Humphreys, Miss L. A.	June 22, 1874.
Humphreys, Miss M. A.	November 11, 1876.
Hunt, B. E.	March 9, 1870.
Hunt, Carrie L.	November 28, 1873.
Hurley, Miss J. M. A.	November 28, 1873.
Hutton, Charles E.	September 1, 1877.
Hutton, Mrs. Lucy M.	June 22, 1874.
Itsell, A. J.	May 9, 1870.
Jackman, Samuel H.	May 5, 1877.
Jenks, D. W.	December 13, 1872.
Jessup, Miss S. A.	April 22, 1876.
Jewett, Miss Annie	June 3, 1872.
Jewett, Miss Susan N.	November 11, 1871.
Johns, Charles T.	January 29, 1876.
Johns, Charles T.	March 9, 1870.
Johnson, J. G.	January 29, 1876.
Johnson, J. M.	November 11, 1871.
Jones, Geo. W.	December 4, 1875.
Jones, J. Thornton	October 26, 1877.
Jordan, John F.	May 5, 1877.
Kane, Richard	December 4, 1875.
Keegan, Miss Mary A.	April 22, 1876.
Kelso, John R.	October 26, 1877.
Kendall, Mrs. C. S.	November 11, 1876.
Kennedy, J. T.	November 11, 1871.
Kennedy, J. G.	November 29, 1867.
Kennedy, Kate	November 11, 1871.
Kennedy, W. W.	May 5, 1877.
Kent, Isabella	November 25, 1869.
Kercheval, Jennie G.	September 1, 1877.
Kimball, C. H.	January 29, 1876.
Kineaid, Mary N.	

LIFE DIPLOMAS—Continued.

NAME.	When Issued.
Kingman, Miss Mary V.	December 4, 1875.
Kinkade, Letitia	November 11, 1876.
Kinne, H. C.	June 3, 1872.
Kirkpatrick, J. M.	November 25, 1869.
Klenck, J. T.	November 11, 1876.
Knowlton, Ebenezer	December 27, 1866.
Knowlton, E. L.	September 1, 1877.
Kratzer, Lella	May 5, 1877.
Lafferty, J. M.	May 5, 1877.
Lamb, Miss Irene	November 28, 1873.
Landes, F. L.	November 11, 1876.
Leadbetter, W. R.	July 12, 1870.
Leggett, Joseph	June 3, 1872.
Leonard, T. C.	December 27, 1866.
Levinson, Miss Rosa	June 3, 1872.
Levy, Daniel	November 28, 1873.
Lewis, Clelia M.	May 5, 1877.
Lighthall, G. E.	March 14, 1871.
Lillie, John B.	December 4, 1875.
Lifowitz, Max	December 4, 1875.
Littlefield, J. D.	December 27, 1866.
London, Jacques	January 29, 1876.
Loomis, Miss Amanda	December 15, 1868.
Lovett, C. M.	January 5, 1875.
Lowe, Mrs. A.	September 1, 1877.
Lubeck, Mrs. Julia M.	January 5, 1875.
Lucky, W. T.	November 29, 1867.
Lynch, Miss Frances	December 27, 1866.
Lynch, W. F. B.	November 11, 1876.
Lyser, Albert	October 26, 1877.
Mack, George C.	December 27, 1866.
Mackall, J. N.	December 13, 1872.
Makinney, H. E.	December 15, 1868.
Mann, Alonzo R.	November 29, 1867.
Manning, Miss Agnes M.	November 28, 1873.
Marks, Bernhard	June 8, 1866.
Marriner, R. K.	December 27, 1866.
Marsh, Mrs. S. W.	June 13, 1871.
Martin, A.	November 11, 1876.
Mayburn, Mrs. M. J.	January 29, 1876.
McArthur, Anna	May 5, 1877.
McBride, H. E.	January 5, 1875.
McCarthy, A. F.	January 5, 1875.
McCarthy, F. H.	November 11, 1876.
McChesney, J. B.	July 5, 1867.
McCormack, Miss Harriet	April 22, 1876.
McDonald, A. H.	December 15, 1868.
McDonald, Mrs. A. H.	January 5, 1875.
McDonald, W. P.	January 5, 1875.
McEwen, John H.	September 1, 1877.
McFadden, Miss Agnes	January 5, 1875.
McFadden, W. M.	March 14, 1871.
McGlashen, C. F.	April 22, 1876.
McKenzie, Margaret	January 29, 1876.
Menefee, C. A.	November 11, 1871.
Metzger, C. L.	January 5, 1871.
Middleton, Miss Eliza F.	June 1, 1875.
Miller, Miss H. J.	September 1, 1877.
Miller, Lafayette	May 5, 1877.
Miller, Ora E.	November 28, 1873.
Miller, Sarah E.	May 5, 1877.
Millette, Percival C.	March 14, 1871.
Milliken, Ellen A.	November 28, 1873.
Minns, George W.	June 8, 1866.
Moore, Anna J.	October 26, 1877.

LIFE DIPLOMAS—Continued.

NAME.	When Issued.
Moore, Ira.....	September 1, 1877.
Moore, John A.....	March 4, 1871.
Moore, Mrs. Mary B.....	December 4, 1875.
Morgan, Mrs. L. A.....	December 15, 1872.
Morgan, Rose E.....	September 1, 1877.
Morrill, Joseph C.....	September 24, 1867.
Morris, George F.....	September 24, 1867.
Morris, N. Z.....	November 28, 1873.
Morse, Augustus, Jr.....	November 29, 1867.
Mumford, Mrs. M. E.....	April 22, 1876.
Murphy, Miss Mary M.....	June 1, 1875.
Myrick, Thomas S.....	December 27, 1866.
Nelson, Henry A.....	March 14, 1871.
Nicholson, Thomas.....	June 22, 1874.
Norman, L. F.....	November 11, 1876.
Nutting, H. N.....	December 27, 1866.
O'Connor, Maria E.....	January 29, 1876.
O'Connor, Joseph.....	March 14, 1871.
O'Dwyer, James.....	June 22, 1875.
Olinger, A. F.....	December 13, 1872.
Oliver, A. W.....	January 29, 1876.
Oliver, J. C.....	September 1, 1877.
Otis, James.....	November 28, 1873.
Overend, Miss Lizzie.....	November 28, 1873.
Parker, Jean.....	March 14, 1871.
Parker, Mrs. F. A.....	May 5, 1877.
Pascoe, Miss Mary I.....	June 3, 1872.
Peachy, Thomas G.....	September 1, 1877.
Pearson, Dana C.....	December 4, 1875.
Peck, George H.....	June 1, 1875.
Pelton, John C.....	December 27, 1866.
Penwell, S. A.....	June 20, 1868.
Phelps, Mrs. M. W.....	June 22, 1874.
Potter, Miss H. A.....	May 5, 1877.
Potter, M. B.....	March 14, 1871.
Powell, Miss Elizabeth.....	June 1, 1875.
Power, Frank.....	November 11, 1871.
Prag, Mrs. Mary.....	September 1, 1877.
Pratt, Elina.....	November 11, 1876.
Prescott, Miss D. S.....	March 14, 1871.
Preston, E. M.....	May 21, 1869.
Price, Caroline.....	November 29, 1867.
Prior, Philip.....	March 14, 1871.
Pritchard, V. P.....	September 1, 1877.
Putnam, J. E.....	December 4, 1875.
Randall, Mrs. A. H.....	May 5, 1877.
Randall, A. H.....	June 19, 1868.
Rattan, Volney.....	June 22, 1874.
Raye, Mrs. M. R.....	May 5, 1877.
Redway, Jacques.....	January 29, 1876.
Reed, L. W.....	July 12, 1870.
Reynolds, Mrs. F. E.....	December 13, 1872.
Riley, J. H.....	November 11, 1876.
Rogers, James.....	January 29, 1876.
Rose, T. H.....	June 20, 1868.
Ross, Jane.....	September 1, 1877.
Rosseau, E.....	May 21, 1869.
Rowe, Miss A. A.....	February 17, 1873.
Rowell, W. K.....	December 27, 1866.
Ruddock, John C.....	May 5, 1877.
Ryan, Amanda.....	May 5, 1877.
Ryder, Miss L. E.....	June 29, 1876.
Salisbury, Mary.....	January 29, 1876.
Sanders, W. A.....	May 21, 1869.
Sankey, M. J.....	January 5, 1875.

LIFE DIPLOMAS—Continued.

NAME.	When Issued.
Saunders, Samuel	May 5, 1877.
Saxe, H. A.	November 11, 1876.
Saxon, Thomas A.	May 5, 1877.
Schellhouse, E. J.	May 21, 1869.
Seawell, J. H.	April 22, 1876.
Shaw, Annie J.	October 26, 1877.
Shaw, Miss E. A.	June 3, 1872.
Shearer, S. M.	December 13, 1872.
Shearer, Mrs. C. O.	November 28, 1873.
Sherman, E. B.	January 29, 1876.
Sherman, Fannie M.	June 1, 1875.
Ship, J. C.	November 28, 1873.
Short, Miss Julia B.	June 1, 1875.
Sibley, J. M.	December 27, 1866.
Simon, Miss Frances	December 13, 1872.
Simonton, George W.	December 27, 1866.
Sinex, T. H.	September 1, 1877.
Sisson, Caroline M.	October 26, 1877.
Slavan, Miss A. E.	June 3, 1872.
Smith, Ansel	May 5, 1877.
Smith, Charles S.	January 29, 1876.
Smith, Grace	September 1, 1877.
Smith, Miss Annie	May 27, 1868.
Smith, Miss Carrie L.	December 13, 1872.
Smith, Miss Jennie	June 3, 1872.
Smith, W. A. C.	June 19, 1868.
Smith, Miss Jennie	June 22, 1874.
Snow, T. N.	November 11, 1876.
Soule, Miss M. L.	September 1, 1877.
Southeimer, J. J.	November 11, 1876.
Southworth, Mrs. E. A.	December 19, 1868.
Standeford, Mrs. N. D.	June 1, 1875.
Steele, Thomas H.	January 5, 1875.
Stevens, Stephen C. (revoked 1873)	March 14, 1871.
Stevenson, Mrs. H. R.	October 26, 1877.
Stincen, Miss Alice M.	November 28, 1873.
Stone, H. P.	March 14, 1871.
Stone, D. C.	December 27, 1866.
Stone, Mrs. B. H.	November 28, 1873.
Stone, Martha	May 5, 1877.
Stowell, Fannie A.	June 22, 1874.
Stowell, Miss M. E.	June 3, 1872.
Stowell, Miss P. M.	June 3, 1872.
Stratton, James	December 27, 1866.
Sullivan, Miss Kate	June 3, 1872.
Sumner, J. H.	November 28, 1873.
Sumner, Henrietta	October 26, 1877.
Swan, Amanda	November 11, 1876.
Swett, John	September 24, 1867.
Swett, Mrs. Mary L.	December 27, 1866.
Swezey, S. I. C.	November 29, 1867.
Tait, George	December 27, 1866.
Taylor, Robert	December 27, 1866.
Taylor, Robert S.	May 5, 1877.
Temple, Miss Emma	November—
Templeton, Miss L. S.	December 13, 1872.
Templeton, M. L.	November 29, 1867.
Thompson, Miss Helen	June 3, 1872.
Thompson, J. A.	November 11, 1876.
Thompson, Louisa	May 5, 1877.
Thurber, A.	November 11, 1871.
Thurber, Mrs. J. V.	October 26, 1877.
Thurston, E. T.	May 21, 1869.
Thurston, Sarah E.	December 4, 1871.
Todd, H. J.	January 29, 1876.

LIFE DIPLOMAS—Continued.

NAME.	When Issued.
Towle, C. B.	April 22, 1876.
Trafton, Dr. A.	November 11, 1871.
Upham, Isaac.	May 21, 1869.
Vandorn, V. J.	May 5, 1877.
Vestal, F. A.	May 5, 1877.
Wade, Miss Margaret.	April 26, 1876.
Walsh, Miss Nellie E.	June 1, 1875.
Warren, C. G.	November 25, 1869.
Warren, E. M.	October 26, 1877.
Warren, R. B.	July 12, 1870.
Waterman, S. D.	November 11, 1871.
Watson, Mrs. C. R.	December 13, 1872.
Watson, Miss Mary J.	June 3, 1872.
Watkins, Emory.	January 5, 1875.
Watson, B. J.	June 1, 1875.
Watson, Miss Lizzie J.	June 22, 1874.
Weeks, M. L.	May 5, 1877.
Weir, Helen.	May 5, 1869.
Weir, Miss Sarah J.	December 15, 1868.
Wells, Addie H.	September 1, 1877.
Wells, Laura H.	March 14, 1871.
Wermuth, Hamilton.	March 14, 1871.
Westby, Miss L. M.	January 26, 1876.
Wheelock, Mrs. D. B.	November 28, 1873.
White, Silas A.	November 11, 1871.
White, T. B.	December 13, 1872.
White, William.	June 20, 1868.
White, Miss Louisa E.	January 5, 1875.
Wideman, James.	October 26, 1877.
Williams, W. J. G.	November 25, 1869.
Wilson, H. C.	May 5, 1877.
Wilson, H. R.	March 14, 1871.
Wilson, James K.	June 1, 1875.
Winn, A. T.	May 5, 1877.
Wood, C. T.	May 5, 1877.
Wood, Mrs. N. A.	November 11, 1876.
Wood, Mrs. E. A.	June 3, 1872.
Woodruff, Miss Frances A.	July 12, 1870.
Woodward, Mrs. A. W.	December 4, 1875.
Woodward, Miss N. Z.	September 1, 1877.
Woodworth, Mrs. Janette E.	June 1, 1875.
Wooll, Mattie L.	October 26, 1877.
Wright, Mrs. A. E.	January 29, 1876.
Yates, W. A.	June 22, 1874.

EDUCATIONAL DIPLOMAS.

NAME.	Expires.
Ables, Thomas J.	June 29, 1880.
Ackleson, Susan.	March 12, 1882.
Adams, Clara A.	July 10, 1882.
Alderson, Miss M. J.	May 17, 1881.
Aldrich, Abbie F.	April 16, 1878.
Alexander, Mary J.	August 29, 1880.
Ames, Martha.	May 13, 1879.
Ambrose, Warren P.	January 27, 1883.
Anderson, George P.	October 23, 1881.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Anderson, W. W.	January 19, 1883.
Ashley, Ella E.	March 18, 1882.
Ashley, Miss Julia V.	February 11, 1879.
Ashton, Mrs. N. Jennie	March 22, 1881.
Atkins, E. S.	March 20, 1883.
Aubrey, Emily	June 11, 1883.
Augustine, S. M.	July 10, 1882.
Avery, Sarah	April 7, 1883.
Ayer, Isaac	October 15, 1881.
Ayers, Mary J.	March 22, 1881.
Babcock, Isabel	October 10, 1882.
Babcock, William S.	January 7, 1881.
Baizley, Minnie	April 21, 1883.
Baker, Samuel D.	August 28, 1881.
Baldwin, F. D.	April 22, 1882.
Banks, Jerome	July 10, 1878.
Barbour, Aaron C.	December 5, 1880.
Barnard, Miss Abbie S.	February 3, 1878.
Barnes, Eliza B.	September 29, 1882.
Barry, Charlotte M.	November 15, 1881.
Bassett, Jennie A.	February 20, 1883.
Bateman, J. K.	January 1, 1883.
Bayley, Minnie	April 4, 1883.
Beach, J. V.	September 27, 1883.
Beamer, Miss Emma	June 5, 1883.
Beck, Mrs. N. B.	June 5, 1880.
Beebe, Sarah M.	November 1, 1883.
Bellinger, Miss Mary	November 16, 1882.
Bennett, Miss Flora	January 1, 1883.
Bennett, Mary H.	January 20, 1879.
Bertolet, Albert	September 24, 1883.
Betancue, Miss Lizzie	December 13, 1879.
Biggs, Thomas	June 27, 1880.
Bightmire, S. A.	September 22, 1881.
Bissell, Joseph	August 30, 1879.
Blackstaff, M. E. D.	August 26, 1882.
Blaisdell, Sabine W.	January 1, 1883.
Blake, Charles M.	October 23, 1881.
Blakely, James O.	September 21, 1883.
Bloomer, A. C.	November 7, 1880.
Boardman, C. F.	January 1, 1882.
Boardman, O. F.	August 22, 1883.
Bodkin, John J.	June 21, 1883.
Bonnard, Miss Eureka A.	May 18, 1881.
Bonner, Mrs. W. G.	January 7, 1883.
Boyle, Miss Mary	June 7, 1883.
Boyle, Sarah J.	March 18, 1882.
Boynton, Miss Kate	May 31, 1881.
Boynton, S. S.	March 18, 1882.
Bradley, Mrs. E. P.	November 15, 1881.
Bradshaw, W. R.	July 10, 1882.
Bragg, Miss M. J.	February 19, 1880.
Bray, W. F.	June 25, 1883.
Breschen, Seraphine	July 18, 1880.
Brigham, Miss Fannie E.	July 10, 1878.
Broadbent, E.	July 10, 1882.
Brooks, E. R.	July 10, 1882.
Brooks, Elisha	July 27, 1882.
Brophy, M.	May 22, 1880.
Brown, Chas. W.	April 22, 1882.
Brown, A. G.	August 27, 1882.
Brown, Miss J. B.	March 22, 1879.
Brown, J. B.	January 10, 1880.
Brown, George J.	December 5, 1880.
Brunslley, Miss M. I.	April 10, 1881.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Bryant, Miss Annie	March 22, 1879.
Buckman, F. S. S.	April 6, 1878.
Bugbey, Mrs. B. N.	March 24, 1880.
Bullfinch, Stephen A.	June 21, 1882.
Bunnell, Mrs. Alice	April 6, 1878.
Burke, Jennie	September 30, 1882.
Burke, Miss Lizzie	November 27, 1878.
Burke, Miss M. J.	November 6, 1882.
Bush, Mrs. E. A.	September 22, 1881.
Bush, Solomon	September 29, 1882.
Butterfield, S. H.	January 1, 1882.
Buzzo, Mrs. M. J.	August 30, 1883.
Byrod, Miss Sarah	January 1, 1883.
Call, Mattie C.	September 16, 1882.
Campbell, Amy T.	March 13, 1881.
Campbell, E. S.	March 20, 1883.
Campbell, Ruth G.	July 9, 1883.
Carlisle, Miss M. A.	September 24, 1883.
Carr, Francis	September 29, 1882.
Casterlin, J. Bertine	October 30, 1883.
Casterlin, Mrs. M. Augusta	October 30, 1883.
Cate, Horatio W.	October 20, 1883.
Chestnutwood, Mrs. J. A.	July 22, 1879.
Chestnutwood, Lizzie	February 28, 1883.
Child, Miss Helen	October 23, 1881.
Chipman, L. J.	January 1, 1882.
Ciprico, Mrs. Anita C.	February 8, 1881.
Clark, W. J.	July 10, 1878.
Clawson, Win. F.	May 17, 1883.
Clement, C. H.	March 13, 1883.
Colby, Julia E.	July 10, 1882.
Colby, Mrs. Mary A.	October 23, 1881.
Coleman, Mrs. D. M.	January 1, 1883.
Collier, Mrs. J. W.	July 29, 1883.
Conrad, C. C.	March 18, 1882.
Conrad, F. W.	July 17, 1883.
Conroy, Ellen A.	January 1, 1883.
Congdon, Jas. S.	January 1, 1882.
Cooper, Miss A. A.	August 7, 1881.
Cooper, Miss S. V.	June 16, 1883.
Cory, Miss A. A.	April 10, 1881.
Cox, Kate M.	January 1, 1882.
Cox, Mary A.	September 24, 1883.
Crane, Miss Amanda	September 22, 1881.
Crane, Ellis T.	May 7, 1883.
Crane, George	November 7, 1880.
Craven, Andrew F.	July 10, 1878.
Cressy, W. E.	September 26, 1883.
Crichton, Mrs. A. M.	January 28, 1882.
Crocker, Miss L. H.	July 10, 1878.
Cross, C. W.	December 13, 1879.
Crotters, Margaret I.	December 5, 1880.
Culbertson, Mary K.	February 3, 1878.
Curragh, J. M.	July 18, 1880.
Curran, Cecelina	September 26, 1882.
Curtis, H. C.	March 13, 1883.
Daniels, Mrs. S. B.	October 5, 1878.
Dascomb, Charles	November 15, 1881.
Davidson, Mrs. Nannie S.	September 22, 1881.
Davidson, R. P.	September 27, 1883.
Davis, A. G. W.	September 29, 1883.
Deakin, Win. J.	July 21, 1883.
Dennis, L. M.	March 20, 1883.
Denure, D. D.	May 31, 1881.
Dixon, Alfred	October 1, 1883.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Dixon, Bessie	July 10, 1882.
Doyle, Irene	July 20, 1882.
Doyle, Mrs. James A.	December 13, 1879.
Dozier, A. W.	October 5, 1878.
Dozier, Melville	April 20, 1878.
Drake, Charles M.	September 22, 1881.
Drake, Elmer	January 1, 1882.
DuBois, John B.	June 27, 1880.
Duenkel, William	July 18, 1880.
Dunbar, Annie S.	January 10, 1880.
Duncan, Annie	January 26, 1883.
Duncan, Elizabeth	January 7, 1883.
Durand, Mary A.	March 13, 1883.
Edwards, W. H.	February 8, 1881.
Elder, J. C.	June 6, 1883.
Elkins, Miss Achaia	June 16, 1883.
Elliott, Ella J.	July 10, 1882.
Elliott, Kate	May 4, 1883.
Elliott, Mary E.	April 10, 1880.
Ellis, Carrie M.	October 10, 1882.
Ennis, Charles	January 1, 1883.
Fahey, Miss Maggie	June 4, 1883.
Fairchild, Hattie E.	February 25, 1883.
Faith, Chauncey	March 13, 1883.
Fanehe, Miss Eliza P.	June 27, 1883.
Fellers, Lorenzo	January 4, 1881.
Felts, J. M.	September 1, 1883.
Fink, Miss A. P.	January 27, 1883.
Fisk, Juliet A.	March 22, 1879.
Fiske, Harry W.	July 25, 1883.
Flint, Almira T.	November 1, 1879.
Flint, Almira T.	October 3, 1880.
Floyd, Enos F.	March 18, 1882.
Folger, Miss H. C.	November 27, 1878.
Folger, Mrs. Sarah J.	January 1, 1883.
Foss, B. R.	July 10, 1882.
Foss, William F. F.	July 10, 1882.
Fowler, B. F.	May 17, 1881.
Fowler, Foland P.	April 3, 1883.
Freman, G. N.	August 29, 1880.
Frissel, Miss Sarah E.	April 6, 1878.
Furlong, Robert	March 13, 1881.
Gabriel, Mrs. C. E.	January 17, 1880.
Gage, Lewis Cass	September 21, 1883.
Gates, Sophia B.	July 10, 1882.
Gavin, Paul A.	March 18, 1882.
Garlick, J. P.	April 10, 1880.
Garrison, Gazena A.	July 18, 1880.
Geer, Emily F.	June 7, 1881.
Geis, S. W.	July 10, 1878.
Germain, Miss Clara	May 13, 1879.
Gilbertson, Abbie	August 24, 1882.
Gilman, Miss Martha A.	November 15, 1881.
Gilson, J. C.	January 1, 1883.
Glidden, R. Y.	January 1, 1882.
Godfrey, Grove K.	November 19, 1882.
Goepp, G.	January 3, 1879.
Goldsmith, Esther	March 20, 1883.
Goodcell, Hy., Jr.	January 1, 1882.
Goucher, G. G.	October 23, 1881.
Gourley, Jennie A.	January 17, 1883.
Grant, Miss Helen A.	December 13, 1879.
Gray, Miss Annie L.	May 31, 1881.
Gray, S. P.	January 1, 1883.
Greene, Katie A. H.	November 15, 1881.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Greenwood, Lula E.	November 8, 1882.
Greer, Miss C. E.	December 13, 1879.
Greer, Mary D.	July 10, 1882.
Griffin, Charles R.	June 21, 1883.
Griffin, Martha E.	September 1, 1883.
Grigsby, Phebe P.	August 31, 1883.
Gunn, Sarah W.	April 16, 1876.
Hagen, Louisa	January 1, 1883.
Haislip, Benj. F.	June 7, 1881.
Haley, W. S.	June 22, 1883.
Hall, Miss F. M.	February 8, 1881.
Hall, Maggie J.	June 27, 1880.
Ham, Chas. H.	April 20, 1878.
Hamill, Amelia	March 18, 1882.
Hamilton, Hiram M.	November 7, 1880.
Hamilton, Rev. Hiram	June 7, 1881.
Hamilton, James T.	January 1, 1882.
Hamilton, Mrs. W. H. H.	December 13, 1879.
Hammond, Hulda A.	March 20, 1883.
Hammond, W. H.	May 1, 1883.
Hapgood, Emma	April 4, 1883.
Harrington, Maggie J.	September 25, 1883.
Harris, Dora B.	October 26, 1882.
Hartmeyer, Mrs. S. L.	January 1, 1882.
Hartson, Iola S.	August 31, 1883.
Harvey, Oliver T.	March 18, 1882.
Hatch, E. Florence	April 4, 1883.
Hatch, J. L.	February 19, 1880.
Hatton, Mrs. Chas. E.	January 27, 1883.
Havens, Carrie	July 10, 1882.
Hawkins, J. O.	June 27, 1880.
Hawks, Carrie M.	December 5, 1880.
Hawks, Emma L.	June 30, 1883.
Hayburn, Annie M.	March 18, 1882.
Hazen, P. J.	November 7, 1880.
Heard, Miss Jennie	October 17, 1883.
Heard, Sue V.	April 17, 1883.
Heath, Miss Alice	June 21, 1883.
Heath, Henry C.	March 20, 1883.
Heaton, Mary C.	April 4, 1883.
Heckman, H. H.	March 18, 1883.
Henderson, Miss M. J.	August 26, 1883.
Heney, Miss Julia A.	October 23, 1883.
Henning, David F.	September 26, 1883.
Hewett, Roscoe	October 5, 1878.
Hiatt, Pleasant	March 24, 1880.
Higby, H. C.	January 3, 1879.
Hill, E. H.	March 13, 1883.
Hilton, Sophia	April 16, 1883.
Hinckley, Almira C.	February 23, 1883.
Hinton, J. M.	July 10, 1882.
Hixon, Geo. C.	February 8, 1883.
Holbrook, Edw.	January 1, 1882.
Holmes, Ada M.	June 21, 1883.
Holmes, M. D.	July 10, 1883.
Holton, Abba L.	May 2, 1883.
Horton, Geo. Wallace	January 1, 1882.
Howard, Emma	July 10, 1878.
Howe, E. P.	January 20, 1879.
Howell, S. S.	July 10, 1878.
Hubbell, S. C.	January 16, 1878.
Hughes, A. B.	
Humphreys, Miss L. A.	November 27, 1878.
Humphreys, Miss M. A.	November 27, 1878.
Hunt, B. E.	June 27, 1880.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Hunt, Mrs. M. C.	May 11, 1883.
Hunter, John	July 2, 1883.
Huntsinger, Miss Jennie	July 22, 1878.
Ingraham, B. F.	July 22, 1879.
Isaman, S. G.	March 20, 1883.
Ivancovich, Nellie R. J.	July 23, 1883.
Jacks, Miss Fannie	March 22, 1879.
Jamison, J. H. S.	September 22, 1881.
Jauvier, A. E.	July 27, 1882.
Jenks, David W.	April 10, 1880.
Jewett, Miss Fidelia	December 13, 1879.
Johnson, G. N.	December 18, 1880.
Johnson, G. W.	March 24, 1880.
Johnson, Joseph W.	August 29, 1880.
Jones, Mrs. C. B.	March 12, 1883.
Jones, Sarah M.	May 5, 1883.
Jordan, Maggie L.	January 1, 1882.
Kane, Richard	January 1, 1882.
Keegan, Miss Mary A.	April 10, 1881.
Kellogg, Adelbert E.	July 18, 1882.
Kelso, John R.	November 1, 1879.
Kelso, Luella	January 27, 1882.
Kelton, Mrs. Mary A.	June 27, 1880.
Kelly, Mrs. L.	June 9, 1883.
Kendall, Mrs. C. S.	October 14, 1883.
Kendall, Sylvia A.	October 3, 1880.
Kennedy, J. F.	October 17, 1880.
Kennedy, T. E.	February 14, 1883.
Kenniston, Charles M.	January 1, 1882.
Kent, Isabella	February 20, 1883.
Kidd, Grace E.	July 14, 1883.
Kilpatrick, E. C.	November 20, 1882.
Kimball, C. A.	April 10, 1880.
King, Charles E.	March 22, 1879.
Kingman, Mrs. M. V.	September 22, 1881.
Kinkade, Letitia	August 7, 1881.
Kinsey, C. C.	October 2, 1882.
Kirkland, Cordelia S.	January 1, 1882.
Klink, John F.	August 7, 1881.
Knighton, William A.	January 4, 1881.
Knowlton, E. L.	April 10, 1881.
Kratzer, Miss Lella	May 17, 1881.
Lafferty, J. N.	June 27, 1880.
Lamb, Miss Irene	March 20, 1878.
Lambert, Daniel	March 18, 1882.
Lander, F. L.	November 1, 1879.
Langan, George	January 1, 1882.
Laurie, Miss B. M.	January 20, 1879.
Law, John K.	July 22, 1879.
Leach, Miss Mira	January 1, 1882.
Leppien, Miss Dora	
Levy, Daniel	July 10, 1878.
Lighte, Miss Pauline S.	August 28, 1881.
Lillie John B.	December 5, 1880.
Lindsay, Mrs. M. A.	June 13, 1883.
Linscott, John W.	September 23, 1883.
Lifowitz, Max	August 29, 1880.
Little, Mary	July 10, 1882.
Lloyd, Mary A.	September 22, 1881.
Loudon, J.	November 27, 1878.
Loofbourrow, Elias	March 18, 1882.
London, J.	September 22, 1881.
Lovett, Chas. E.	July 10, 1878.
Lowe, Mrs. A.	May 11, 1883.
Lowe, Sarah	January 13, 1883.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Ludlum, Evelyn M.	November 15, 1881.
Lynch, Ida M.	July 5, 1883.
Lynch, Miss Tillie S.	December 13, 1879.
Lynch, W. F. B.	January 4, 1881.
Lyser, Albert	February 19, 1880.
Maddux, Miss Mary	September 21, 1883.
Magoon, Wm. H.	March 22, 1879.
Maguire, Louisa	April 26, 1883.
Markham, Chas.	October 10, 1882.
Martin, Miss E. J.	July 10, 1882.
Martin, James M.	January 4, 1881.
Marvin, Miss A.	June 27, 1880.
Mathews, Mrs. M. E.	August 29, 1880.
Mathews, Mary	November 20, 1882.
McArthur, A. W.	January 26, 1883.
McCann, Maria E.	March 5, 1883.
McCleery, Lizzie	January 1, 1883.
McCarthy, Thomas	July 20, 1882.
McColgan, Kate F.	October 5, 1878.
McCroskey, R. C.	June 13, 1883.
McDonald, Kate	March 18, 1882.
McDonald, Mrs. J.	March 24, 1880.
McDonald, J. J.	March 18, 1881.
McDonald, W. P.	January 22, 1880.
McEwen, John	July 10, 1882.
McFadden, John	December 18, 1880.
McGlashen, C. F.	July 10, 1878.
McGowan, Patrick H.	March 24, 1880.
McHugh, Peter	July 10, 1882.
McKean, Lottie	August 29, 1880.
McKean, W. G.	November 1, 1883.
McKown, Mrs. M. E.	October 23, 1881.
McKusick, H. P.	September 22, 1881.
McPhail, J. S.	January 1, 1883.
McPhee, Miss V. J.	March 22, 1879.
McPherson, Stephen	January 1, 1883.
McPherson, Mrs. S. W.	April 17, 1883.
Meagher, John F.	April 10, 1880.
Merrill, Ida M.	January 1, 1882.
Merritt, Julia E.	March 24, 1880.
Michener, Mrs. M. E.	January 1, 1882.
Miles, Mrs. R. S.	June 7, 1881.
Miller, Miss Sarah E.	October 23, 1881.
Miller, Emma J.	January 7, 1883.
Miller, John H.	October 3, 1880.
Millington, Mrs. M. A. H.	September 25, 1883.
Mills, Myron	April 23, 1883.
Minta, Wesley	November 7, 1880.
Montgomery, A. C.	September 6, 1883.
Montgomery, A. S.	May 17, 1881.
Moore, Mrs. B. F.	July 10, 1878.
Moore, Ira	November 10, 1882.
Moore, Mrs. M. E.	November 1, 1883.
Morgan, Rose E.	July 10, 1882.
Morgan, Richard	August 7, 1881.
Morford, N. A.	March 18, 1882.
Mower, Edith	January 1, 1883.
Mullins, Miss H.	July 10, 1882.
Munford, Mrs. M. E.	January 1, 1882.
Murnan, John T.	January 1, 1882.
Murphy, C. H.	August 31, 1883.
Murrey, Miss Maggie	June 16, 1883.
Neill, M. A. O.	April 22, 1882.
Newcomer, Jacob	September 4, 1882.
Nickerson, W. A.	October 11, 1882.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Nolan, M. J.	October 10, 1882.
Norman, L. F.	August 7, 1881.
Norris, Laura B.	April 4, 1882.
Norvell, Jos. A.	March 18, 1882.
O'Brien, Miss Kate	August 26, 1882.
O'Connor, Miss Maria	March 8, 1879.
O'Laughlan, Mrs. Nellie	November 7, 1880.
O'Leary, Kate R.	September 2, 1882.
Oliver, A. W.	July 22, 1879.
Oliver, Mrs. C. F.	July 22, 1879.
Oliver, J. C.	January 1, 1882.
Ornstrong, Flora S.	March 24, 1880.
Owen, Miss Georgie	January 4, 1881.
Owens, Nellie M.	June 14, 1882.
Palmer, Miss R. M.	June 27, 1880.
Parker, James L.	June 27, 1880.
Parker, Flora A.	September 22, 1881.
Patterson, Miss E. S.	January 31, 1883.
Peachy, Thos. G.	July 18, 1880.
Peadry, Frank A.	October 3, 1880.
Pearce, Miss Carrie	August 7, 1881.
Pedler, F. A.	March 13, 1881.
Pendegast, H. B.	January 4, 1881.
Pitcher, Charlotte M.	January 26, 1882.
Phillips, Anna M.	September 24, 1882.
Potter, Harriet	January 7, 1883.
Powell, Miss Elizabeth	July 10, 1878.
Powers, Talbot P.	January 1, 1882.
Prag, Mrs. Mary	October 17, 1880.
Pratt, A. L.	September 29, 1882.
Pratt, Eunice C.	August 13, 1883.
Pratt, Miss Mary	October 17, 1880.
Pratt, Orson M.	June 7, 1883.
Prewitt, James	
Price, Harrison	July 10, 1882.
Primm, F. P.	October 1, 1883.
Putnam, J. E.	July 10, 1878.
Pyatt, Miss Jennie	May 7, 1882.
Rattan, V.	May 22, 1880.
Randall, Mrs. A. H.	February 20, 1883.
Raven, Mary H.	January 1, 1883.
Raye, Mrs. Martha	July 10, 1882.
Reavis, Walter Scott	October 3, 1880.
Redway, Jacques W.	January 4, 1881.
Reed, Dayton A.	June 11, 1883.
Renfro, Lewis C.	August 29, 1880.
Righter, F. M.	January 25, 1882.
Roberts, B. F.	March 13, 1883.
Roberts, Lizzie	July 10, 1882.
Robertson, George B.	June 27, 1880.
Robinson, Mrs. S. M. P.	January 1, 1882.
Rogers, James	April 6, 1878.
Ross, Jane	June 30, 1883.
Rousseau, Mrs. Lida	September 3, 1883.
Rowe, Lizzie A.	September 29, 1882.
Royall, J. P.	March 13, 1881.
Royce, Ella J.	January 1, 1882.
Ruddock, John C.	October 23, 1883.
Ryan, Miss Amanda	August 4, 1879.
Ryder, Miss L. E.	August 29, 1880.
Salisbury, Mary A.	November 7, 1880.
Sankey, Mrs. Mary J.	July 18, 1880.
Saunders, Samuel	March 13, 1881.
Savage, Nellie H.	February 26, 1883.
Saxe, Herman A.	October 23, 1881.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Saxton, T. A.	March 13, 1881.
Seavey, Oscar F.	May 7, 1883.
Seawell, J. H.	January 20, 1878.
Senger, Heinrich	June 25, 1883.
Sexton, Mrs. Ella M.	March 18, 1882.
Shaw, Miss Annie J.	August 28, 1881.
Shaw, Sebastian	April 3, 1883.
Sherman, Ella J.	June 28, 1881.
Sherman, Miss M. F.	February 19, 1880.
Shirley, James W.	March 27, 1883.
Shuck, L. M.	March 23, 1883.
Shuey, Sarah I.	July 10, 1882.
Siekal, M. T.	January 1, 1882.
Sill, E. R.	January 20, 1879.
Silliman, C. H.	July 19, 1883.
Sinex, J. H.	January 20, 1879.
Sisson, Mrs. Caroline M.	September 24, 1883.
Slack, Clay H.	January 21, 1882.
Smith, Ansel	August 29, 1880.
Smith, Albert A.	October 26, 1882.
Smith, Miss Grace	October 17, 1880.
Smith, James D.	November 7, 1880.
Smith, Lyman	August 23, 1883.
Smith, Rosa I.	August 26, 1882.
Snow, T. N.	October 10, 1882.
Sollinger, J. A.	November 7, 1880.
Soule, Fannie L.	October 23, 1881.
Soule, Maria L.	December 5, 1880.
Southeimer, John J.	August 7, 1881.
Spring, Mrs. Fannie	January 1, 1882.
Standish, Miss H. M.	December 18, 1880.
Standeford, Mrs. N. D.	March 13, 1881.
Stevenson, Helen R.	March 18, 1882.
Stewart, Frances A.	August 29, 1882.
Stincen, Emma E. C.	March 22, 1881.
Stone, Henrietta	March 20, 1883.
Stone, Martha	March 26, 1883.
Stone, W. W.	July 10, 1878.
Stowell, F. A.	February 11, 1879.
Sturges, S.	March 18, 1882.
Sumner, John H.	February 3, 1878.
Swain, Orlando E.	March 18, 1882.
Swau, Amanda	July 10, 1882.
Sweeney, S. E.	July 9, 1883.
Taylor, Mrs. H. P.	May 17, 1881.
Taylor, William S.	July 5, 1883.
Temple, Miss Emma	May 13, 1879.
Thomas, Mary A.	October 23, 1881.
Thompson, Miss Louisa	March 13, 1881.
Thompson, J. N.	July 22, 1879.
Thurton, M. S. L.	August 30, 1879.
Tierney, Maggie A.	September 29, 1882.
Tiffany, A. J.	June 21, 1883.
Tillotson, Henry L.	January 10, 1880.
Tilton, Etta M.	January 27, 1883.
Toothaker, Miss M. O.	January 1, 1883.
Tootman, Henry E.	March 20, 1883.
Towle, Miss S. G.	July 10, 1882.
Trout, Daniel H.	January 10, 1880.
True, Charles F.	October 5, 1878.
Turner, H. F.	August 28, 1881.
Tyus, Mary A.	January 1, 1882.
Underwood, J. C.	January 7, 1883.
Van Dorn, V. J.	August 29, 1880.
Van Schaick, Mrs. Mary A.	May 13, 1879.

EDUCATIONAL DIPLOMAS—Continued.

NAME.	Expires.
Vercoe, James	September 25, 1883.
Vestal, F. A.	July 10, 1878.
Vincent, Mattie E.	September 25, 1883.
Wade, Mrs. S. E.	September 6, 1883.
Walbridge, Jennie M.	March 18, 1882.
Waldron, S. A.	January 28, 1882.
Walker, Charles H.	June 27, 1880.
Wallace, Alma	January 1, 1882.
Wallace, G. W.	January 1, 1883.
Wallace, W. B.	July 22, 1879.
Walsh, Ida C.	April 31, 1889.
Walsh, Miss Nellie E.	August 30, 1879.
Walter, Carrie S.	March 27, 1883.
Walter, Emeline S.	January 1, 1882.
Wanzer, Mrs. L. M. F.	April 6, 1878.
Ward, Miss Mary A.	December 5, 1880.
Warren, E. N.	September 25, 1883.
Wash, W. A.	May 5, 1883.
Washburn, Miss Georgie	March 18, 1883.
Watkins, Emory	January 20, 1879.
Watson, Miss Lizzie J.	July 22, 1879.
Webb, Sallie B.	June 27, 1880.
Webster, Mrs. M. M.	August 24, 1883.
Weeks, Annie C.	October 23, 1881.
Weeks, George W.	November 20, 1882.
Weeks, M. L.	March 18, 1882.
Weir, Helen	January 1, 1883.
Welch, George W.	May 11, 1883.
Wells, Addie H.	July 10, 1872.
Wells, Joseph H.	February 8, 1881.
Wenk, Robert E.	February 8, 1881.
Weston, Miss Ada	January 16, 1878.
Wharton, J. F.	May 19, 1883.
Wheeler, Mrs. J. D.	August 26, 1882.
White, Miss Louise E.	December 13, 1879.
White, Mrs. Sara	April 10, 1881.
White, A. F.	August 28, 1881.
White, Mattie H.	August 30, 1882.
White, Alice M.	January 1, 1883.
Whitehurst, Thomas W.	February 26, 1883.
Whitmore, Ella L.	May 13, 1879.
Wible, Anna E.	October 1, 1883.
Wickes, John T.	March 18, 1882.
Wideman, James	September 22, 1881.
Wilbur, E. W.	March 13, 1883.
Wilson, H. C.	March 13, 1881.
Wilson, Mrs. E. A.	October 2, 1882.
Wilson, Sarah M.	March 29, 1883.
Withington, Augusta	April 3, 1883.
Wood, Jesse	October 22, 1882.
Wood, C. F.	September 29, 1882.
Wood, Mrs. N. A.	July 10, 1881.
Woods, Miss Theo.	August 5, 1883.
Woodward, Mrs. N. Z.	August 7, 1881.
Woodworth, Mrs. J. E.	December 13, 1879.
Wooll, Miss Hattie	August 7, 1881.
Wozencraft, W. R.	April 22, 1882.
Wright, Isaac	January 1, 1883.
Wright, J. M.	January 1, 1882.
Wythe, Sarah J.	March 18, 1882.
Yates, Miss Lizzie	January 4, 1881.
Yates, W. A.	April 10, 1880.
Young, Nestor A.	August 7, 1881.

FIRST GRADE CERTIFICATES.

NAME.	Expires.
Aaron, Miss Amelia	March 24, 1878.
Ackerman, Miss Dell	September 22, 1879.
Ackleson, Susan	January 1, 1880.
Adams, Clara A.	May 22, 1878.
Adamson, E. F.	January 1, 1880.
Adamson, W. H.	January 1, 1880.
Agar, Kate	January 1, 1880.
Aldrich, Byron L.	November 15, 1879.
Allen, Charles H.	September 3, 1881.
Allen, Fannie E.	January 1, 1881.
Allen, Jessica G.	March 29, 1881.
Allen, Lulu Edna	October 23, 1879.
Allen, Louisa D.	July 10, 1879.
Alvord, J. B.	January 1, 1880.
Ambrose, Warren B.	May 31, 1879.
Anderson, George P.	June 27, 1878.
Anderson, Irene E.	March 29, 1881.
Anderson, Julia	March 29, 1881.
Anderson, Miss Mary	October 9, 1881.
Anderson, William P.	January 1, 1880.
Andrew, Cyrus P.	March 18, 1880.
Aran, W. F.	March 18, 1880.
Armstrong, Jennie	January 1, 1881.
Armstrong, Mrs. Joste R.	March 29, 1881.
Armstrong, Nellie	October 1, 1881.
Arrowsmith, V.	January 1, 1881.
Arthurton, S. L.	March 24, 1878.
Ashley, Ella E.	July 18, 1878.
Ashton, Mrs. N. S.	January 10, 1878.
Ashurst, Miss Pamela	December 5, 1878.
Atkins E. S.	March 18, 1880.
Augustine, Samuel M.	January 16, 1879.
Auld, Cecelia M.	March 24, 1878.
Aulls, James Taylor	January 1, 1880.
Avery, Sophia E.	August 27, 1878.
Ayer, Henry	September 22, 1879.
Ayer, Hy.	January 1, 1880.
Ayres, Lidie	March 30, 1881.
Babb, Mary A.	March 18, 1880.
Babcock, Dollie E.	March 30, 1880.
Babcock, Isabel	September 22, 1879.
Badgley, O. E.	June 30, 1881.
Baker, Modena I.	March 29, 1881.
Baker, Orie	October 1, 1881.
Baker, W. H.	August 26, 1880.
Banks, George	November 1, 1880.
Banks, Lizzie	March 30, 1880.
Banks, Henry H.	July 10, 1879.
Banks, Lily	September 22, 1879.
Bainbridge, Aug. C.	January 1, 1880.
Barbour, William R.	July 18, 1878.
Barnes, Endora A.	March 29, 1881.
Barnes, Mrs. Eliza B.	April 10, 1879.
Barnes, Emmogene A.	March 26, 1879.
Barnes, Margaret S.	March 26, 1879.
Barkley, John G.	January 1, 1880.
Barrett, Miss Franc C.	August 7, 1879.
Barry, Annie S.	March 29, 1881.
Barry, Charlotte M.	January 10, 1878.
Barry, Thomas F.	January 30, 1881.
Bartholomew, Ella M.	June 30, 1881.
Bassett, Jennie	January 1, 1880.
Bassett, Mary P.	March 30, 1880.
Bateman, J. M. K.	September 2, 1880.
Bateman, Henry	March 26, 1879.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Batten, Mary	October 31, 1878.
Baunan, Miss Maggie	August 30, 1881.
Beach, J. V.	October 10, 1880.
Beal, Chas. R.	May 31, 1879.
Beardslee, Secley T.	June 25, 1879.
Beebe, Sarah M.	October 10, 1880.
Beemer, Emma	January 1, 1880.
Beggs, J. J.	September 22, 1879.
Bell, Lizzie	June 30, 1881.
Bellinger, Mary	February 19, 1878.
Benfey, Myra Pauline	September 22, 1879.
Bennett, Glora F.	August 7, 1879.
Bennett, Minna A.	March 28, 1878.
Bernard, Miss Lizzie	October 23, 1879.
Benson, Miss A. E.	March 18, 1880.
Bentley, S. E.	March 18, 1880.
Bentley, Lettie E.	January 10, 1878.
Berry, J. E.	October 1, 1880.
Bertolet, Albert	August 7, 1879.
Bertolet, Mrs. M.	July 10, 1880.
Betts, Mrs. E. J.	October 10, 1880.
Bicknell, Bertha A.	January 10, 1878.
Bightmire, S. A.	May 22, 1878.
Bills, Allie R.	June 30, 1881.
Bingham, W. H.	March 29, 1881.
Bird, Belle	March 29, 1881.
Bird, Mary	March 28, 1878.
Birdsall, Mrs. Rebecca B.	July 10, 1879.
Bishop, Cynthia M.	October 10, 1881.
Bivens, Mrs. Emily	January 26, 1880.
Black, A. P.	October 10, 1880.
Black, E. May	March 29, 1881.
Black, Minnie C.	March 18, 1880.
Black, Mattie C.	June 27, 1878.
Blackman, G. D.	January 1, 1881.
Blackmar, Frank W.	August 28, 1879.
Blackmer, Ellen	April 28, 1881.
Blackstaff, M. E. D.	July 18, 1878.
Blackwood, Lucy B.	October 10, 1880.
Blain, Chas. S.	January 1, 1881.
Blaisdell, Sabine W.	July 18, 1878.
Blake, Chas. M.	July 10, 1876.
Blanchard, J. E.	April 25, 1881.
Bland, Register W.	January 1, 1881.
Boalt, Lizzie E.	October 1, 1881.
Boardman, O. F.	January 1, 1880.
Bodkin, Jno. J.	January 1, 1880.
Bodwill, Miss L. B.	April 10, 1879.
Bond, Ella	January 1, 1880.
Bonelli, Eugene F.	October 1, 1881.
Bonnard, Miss E. A.	February 19, 1878.
Bonney, Sarah F.	March 30, 1880.
Bosehem, Ada	June 30, 1881.
Boucher, Sadie E.	October 1, 1881.
Bowse, Ellen F.	July 10, 1879.
Boyden, Edgar A.	April 10, 1878.
Boyers, Carrie L.	July 10, 1879.
Boyle, Mary	July 10, 1879.
Boyle, Miss S. J.	February 19, 1878.
Boynton, S. S.	April 10, 1878.
Bradbury, Geo. F.	June 30, 1881.
Bradbury, Maggie E.	October 10, 1880.
Braddock, D. W.	October 1, 1881.
Bradley, Flora A.	January 1, 1881.
Bradner, W. F.	August 29, 1878.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Bradnu, Mettie F.	May 17, 1879.
Bradshaw, Hattie	January 1, 1881.
Bradshaw, W. R.	August 29, 1878.
Brady, Theresa E. B.	September 22, 1879.
Bragg, Miss R. H.	October 31, 1878.
Bragg, Miss Lizzie	October 31, 1878.
Bray, W. F.	July 10, 1880.
Breed, E. P.	June 30, 1881.
Broadbent, Elijah	June 25, 1879.
Brooks, E. R.	March 28, 1878.
Brooks, Elisha	April 10, 1879.
Brooks, Elista	July 10, 1879.
Brothers, G. A.	June 30, 1881.
Brower, Mrs. D. C.	June 30, 1881.
Brown, Charles W.	July 18, 1878.
Brown, B. L.	October 4, 1880.
Brown, Mary J.	March 29, 1881.
Brown, Samuel A.	March 29, 1881.
Brown, W. H.	June 30, 1881.
Brown, L. L.	June 30, 1881.
Brumley, Miss M. J.	March 24, 1881.
Buckley, Emma S.	March 26, 1879.
Budd, Mrs. A. S.	April 6, 1880.
Buel, Emma W.	April 10, 1878.
Bull, Mary D.	January 1, 1881.
Bullfinch, Stephen A.	January 1, 1880.
Bunker, Carrie R.	September 22, 1879.
Burchfield, Miss E. M.	January 1, 1880.
Burke, Jennie	March 24, 1878.
Burke, Mary Julia	October 23, 1879.
Burnett, Harvey D.	January 1, 1880.
Burns, Miss Emma	October 23, 1879.
Burseough, Lizzie	July 10, 1879.
Burt, A. L.	March 18, 1880.
Burt, Minnie Clara	March 26, 1879.
Butler, A. D.	October 10, 1880.
Butler, Miss Orpha	January 16, 1879.
Butterfield, Ella E.	August 7, 1879.
Butterfield, S. H.	October 31, 1878.
Byrne, Hugh J.	January 1, 1880.
Byrod, Mrs. Sarah B.	January 1, 1880.
Caldwell, Mrs. M. E.	May 22, 1878.
Call, Mattie C.	October 31, 1878.
Callahan, Mary E.	September 22, 1879.
Calvin, Eugene	July 10, 1880.
Campbell, Annie B.	March 30, 1880.
Campbell, E. S.	March 18, 1880.
Campbell, Ruth G.	June 27, 1878.
Cauham, Miss M. J.	November 15, 1879.
Carlisle, Mary A.	April 6, 1880.
Carlisle, Cannie	July 18, 1878.
Carmichael, P. J.	October 10, 1880.
Carpenter, May	March 29, 1880.
Carr, J. E.	October 1, 1880.
Carr, Mary E.	March 26, 1879.
Carr, Francis	October 3, 1878.
Carran, Celina R.	February 8, 1879.
Carroll, Miss Fannie	June 16, 1880.
Carswell, Ella W.	March 28, 1878.
Carusi, Samuel P.	September 22, 1879.
Caruthers, Eli	October 31, 1878.
Carver, Henry C.	January 1, 1880.
Casey, Mary Elizabeth	January 16, 1879.
Casterlin, Mrs. M. A.	January 16, 1879.
Casterlin, J. Bartine	November 7, 1878.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Cate, Horatio W.	October 10, 1880.
Chadwick, A. M.	March 29, 1880.
Chamberlain, Annie E.	September 25, 1881.
Chamberlain, Cynthia R.	June 27, 1878.
Chaplin, Alice M.	March 29, 1881.
Chase, Mrs. Alice J.	September 22, 1879.
Chase, Miss Hattie	September 22, 1879.
Chestnut, J. G.	October 10, 1880.
Chestnutwood, Lizzie	January 1, 1880.
Child, Augusta	October 23, 1879.
Childs, Helen	June 27, 1880.
Chilson, D. W.	March 18, 1880.
Church, W. S.	July 18, 1878.
Church, W. S.	June 30, 1881.
Churchill, Clara I.	March 30, 1880.
Ciprico, Miss Anita	February 2, 1878.
Ciprico, Evelyn	July 10, 1879.
Clark, D. C.	March 29, 1880.
Clark, Etta D.	January 10, 1878.
Clark, Mattie A.	April 10, 1878.
Clark, Mary E.	July 18, 1878.
Clark, Sophronia A.	June 30, 1880.
Clark, X. Y.	October 1, 1881.
Clarke, Charlotte K.	March 26, 1879.
Classen, Louise M.	January 16, 1879.
Claussy, Miss Annie Maud	September 22, 1879.
Clawson, William F.	July 10, 1880.
Clement, C. H.	January 1, 1880.
Clements, Charles C.	January 1, 1881.
Clery, Mrs. Mary L.	July 10, 1879.
Coburn, L. F.	October 1, 1881.
Code, Emma S.	June 30, 1881.
Colby, Julia E.	January 10, 1878.
Colby, Mrs. Mary A.	May 17, 1878.
Colby, Mary A.	January 1, 1880.
Colby, Phebe S.	March 18, 1880.
Cole, Frances	March 18, 1880.
Cole, Marie	March 27, 1879.
Cole, Miss Emma F.	September 22, 1879.
Coleman, Charles, Jr.	August 29, 1878.
Connell, Sadie	September 22, 1879.
Conrad, Francis W.	October 23, 1879.
Conroy, Lizzie	February 19, 1878.
Convis, Mrs. M. E.	October 17, 1878.
Coolidge, Abbie	October 31, 1878.
Cooper, Mrs. F. A.	April 10, 1878.
Cooper, Susie V.	January 1, 1880.
Cornelius, Z. E.	July 10, 1880.
Cory, Lizzie	March 28, 1878.
Cory, Nellie	April 10, 1879.
Coryell, Hattie	March 27, 1880.
Cosgriff, Mrs. Amelia	October 17, 1878.
Cough, Daniel	March 29, 1880.
Coult, Mrs. Ella A.	January 1, 1880.
Courter, Henry F.	March 30, 1880.
Covilland, Charles	June 30, 1880.
Cowie, Annie R.	March 26, 1879.
Cowlie, Florence	March 29, 1880.
Cox, Beverly B.	September 22, 1879.
Cox, Miss K. M.	January 10, 1878.
Cox, Mary M.	January 4, 1879.
Coyner, J. M.	February 2, 1878.
Craddock, Sarah E.	August 28, 1879.
Craid, Miss Elizabeth	August 28, 1879.
Craig, Annie C.	June 30, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Crane, Charles B.	March 18, 1880.
Crane, Ellis T.	March 18, 1880.
Cranz, Miss Sophia	January 1, 1880.
Craven, Mrs. N. R.	October 1, 1881.
Cressey, Willis E.	October 10, 1880.
Crittenden, J. L.	October 10, 1880.
Crofton, Miss Kittie	January 10, 1883.
Cromwell, C. H.	June 30, 1881.
Cromwell, James G.	January 1, 1880.
Cronan, Delia	January 1, 1880.
Crowell, Mrs. L. A.	July 9, 1881.
Crumry, Alice A.	March 28, 1878.
Cullen, Fannie	June 30, 1881.
Culver, Ella R.	January 1, 1880.
Cummings, E. C.	October 10, 1880.
Cummings, David B.	June 30, 1881.
Curran, Miss M. K.	March 18, 1880.
Curtis, H. C.	March 18, 1880.
Curtis, Louis F.	January 1, 1881.
Custer, Mrs. Anna M.	December 5, 1878.
Dame, Miss Mary L.	June 7, 1879.
D'Ancona, Alex. D.	July 10, 1879.
D'Ancona, Charlotte A.	January 1, 1880.
D'Ancona, Mary	January 1, 1880.
Daly, Cecilia A.	October 1, 1881.
Darling, Cora E.	May 11, 1881.
Darling, Frank H.	June 30, 1881.
Davidson, R. P.	January 1, 1880.
Davies, Abbie A.	March 26, 1879.
Davis, Addie A.	March 30, 1879.
Davis, A. G. W.	January 1, 1879.
Davis, Jennie E.	March 29, 1881.
Davis, Levi	August 29, 1878.
Davis, N. W.	March 30, 1880.
Day, Frances M.	March 28, 1878.
Day, F. H.	March 13, 1879.
Deacon, S. Anna	March 13, 1879.
Delaney, R.	March 29, 1880.
Dennis, L. M.	March 18, 1880.
Deuel, Mrs. H. S.	March 18, 1880.
Devee, Miss Alpha	October 23, 1879.
Dickenson, John M.	June 30, 1881.
Diekenon, Maria	January 1, 1881.
Dickey, Herbert S.	July 10, 1879.
Dickson, James M.	October 10, 1880.
Dilley, A.	September 22, 1879.
Dippel, Frances H.	October 31, 1878.
Dixon, Alfred	March 30, 1880.
Dixon, Bessie	March 26, 1879.
Donnelly, Laura J.	September 22, 1879.
Doty, James M.	June 30, 1881.
Downes, Blanche L.	March 29, 1881.
Doyal, Wilbur	June 30, 1881.
Doyle, Irene M.	June 25, 1879.
Drake, Charles M.	July 18, 1878.
Drake, Elmer	January 10, 1878.
Drake, Milton	October 31, 1878.
Du Bruntz, A. B.	October 1, 1881.
Duggan, Amelia	January 1, 1881.
Duggan, Adelaide	January 1, 1881.
Duncan, Annie	January 1, 1880.
Duncan, Belle M.	June 30, 1881.
Dunham, C. F.	October 10, 1880.
Dunphy, Jennie C.	October 31, 1878.
Dunphy, Mary R.	October 31, 1878.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Dunphy, Sallie P.	January 1, 1880.
Duraind, Mary A.	September 22, 1879.
Durphy, Peter T.	July 10, 1880.
Durst, John H.	June 30, 1881.
Dusing, H. F.	June 30, 1881.
Eastman, Augusta	May 22, 1878.
Easton, Lydia E.	March 18, 1880.
Easton, Mrs. C. A.	April 16, 1881.
Eddy, John M.	March 18, 1880.
Edwards, D. K.	June 30, 1881.
Edwards, Joseph	October 10, 1880.
Eggleston, Josephine	October 10, 1880.
Elder, J. C.	October 3, 1878.
Elkins, Miss Adria	January 1, 1880.
Elliot, Mary	October 1, 1880.
Elliott, Mrs. E. J.	February 19, 1878.
Elliott, Kate	August 7, 1879.
Ellis, Carrie M.	September 22, 1879.
Ellis, Kate Hunter	July 10, 1879.
Emerson, Frank W.	January 15, 1881.
Ennis, Charles	July 18, 1878.
Ensign, Sarah Jane	March 13, 1879.
Ephraim, Adeline	July 10, 1879.
Ephraim, Jennette	July 10, 1879.
Evans, Miss D. M.	July 22, 1875.
Evans, Miss Mary E.	January 1, 1880.
Everts, Edward	January 16, 1879.
Fagg, Belle	March 26, 1879.
Fairchild, Carrie S.	March 30, 1880.
Fairchild, Mary F.	January 1, 1880.
Faith, Chauncey	September 22, 1879.
Fanche, Mrs. Eliza P.	January 1, 1880.
Farmer, Fannie	March 26, 1879.
Farnham, Chas. E.	March 26, 1879.
Farnsworth, Julia B.	March 26, 1879.
Farquar, C. S.	January 1, 1880.
Fassett, F. R.	October 1, 1881.
Faulkner, James	April 22, 1880.
Faull, Hattie G.	August 23, 1879.
Featherly, Henrietta	May 27, 1878.
Felts, J. M.	January 1, 1880.
Fennell, Lizzie	July 10, 1879.
Field, Miss Sarah	February 8, 1879.
Filber, Thos.	March 18, 1880.
Finney, Miss F. A.	June 27, 1878.
Fischer, Jennie	January 1, 1881.
Fischer, Mrs. L. P.	January 1, 1881.
Fitts, Elizabeth	October 16, 1881.
Fitzgerald, Nehemiah	January 16, 1879.
Fitzpatrick, Ella M.	January 16, 1879.
Fleming, Katy	July 18, 1878.
Flint, Albert S.	January 1, 1880.
Folger, Mrs. S. J.	January 1, 1880.
Footman, Henry E.	March 22, 1877.
Ford, Ella M.	September 26, 1881.
Ford, J. A.	April 10, 1878.
Ford, Maggie	March 29, 1881.
Ford, Plin	August 7, 1879.
Foskett, H. B.	January 1, 1881.
Foss, Benjamin R.	July 10, 1879.
Fowler, Foland P.	October 17, 1878.
Franklin, Benjamin H.	March 30, 1880.
Frisbie, P. A.	March 18, 1880.
Fuller, Frank C.	August 23, 1879.
Funston, Nina E.	August 23, 1879.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Funston, Nina E.	January 1, 1880.
Furlong, Robert	January 10, 1878.
Gage, Lewis Cass	July 10, 1879.
Gage, M. D.	January 1, 1881.
Gaines, Chauncey	January 16, 1879.
Galbraith, W. H.	January 1, 1881.
Gallagher, Fannie E.	January 1, 1880.
Gambee, E. B.	June 30, 1881.
Gardiner, Maggie	March 30, 1880.
Garland, Miss A. A.	April 10, 1878.
Garlick, Etha F.	September 30, 1881.
Garton, Marietta	August 28, 1879.
Gates, M. H.	September 22, 1879.
Gates, Mrs. Sophia B.	July 10, 1879.
Garigan, Annie E.	September 22, 1879.
Garvin, Mary Agnes	September 22, 1879.
Gavin, Paul Achille	January 16, 1879.
Garwood, Sarah E.	March 18, 1880.
Geer, Emily F.	March 24, 1878.
George, Rilla	January 1, 1880.
Germain, Sallie	July 18, 1878.
Gesford, H. C.	March 18, 1880.
Gibbons, Annie	January 1, 1880.
Gibson, Will F.	October 1, 1881.
Gilechrist, Charles A.	September 24, 1881.
Gillis, Hudson B.	July 18, 1878.
Gilman, Martha A.	October 31, 1878.
Gilmor, Harriet N.	March 26, 1879.
Gilson, J. C.	October 31, 1878.
Glidden, Cora A.	June 30, 1880.
Glidden, R. Y.	October 30, 1878.
Goepf, G.	January 22, 1878.
Goggin, Emily K.	June 30, 1881.
Goin, J. W.	October 1, 1881.
Goldman, Julia E.	January 1, 1881.
Goldsmith, Ada	March 29, 1881.
Goldsmith, Bertha	September 22, 1879.
Goldsmith, Miss Esther	March 18, 1880.
Goode, Richard	July 18, 1878.
Goodell, George	January 1, 1881.
Goodspeed, Florence	October 10, 1880.
Goodspeed, T. V.	June 30, 1881.
Gordon, Miss Mary A.	November 7, 1878.
Gorman, W. C.	July 10, 1880.
Gosling, Delia	March 18, 1880.
Gourley, Jennie A.	March 24, 1878.
Goustiaux, Albertine	January 22, 1878.
Gracey, Robert	January 1, 1880.
Graham, Miss E. E. V.	November 1, 1881.
Graham, Theresa J.	March 29, 1881.
Granger, W. C.	April 1, 1880.
Grant, Mary E.	November 14, 1880.
Graves, G. E.	March 29, 1881.
Graves, Oscar E.	January 1, 1881.
Gray, Miss A. L.	March 24, 1878.
Gray, Charles P.	September 22, 1879.
Gray, S. P.	August 28, 1879.
Green, Ashnael	March 29, 1881.
Green, Kate	May 22, 1878.
Greenwood, Benj. S.	October 1, 1881.
Greenwood, Lula E.	August 28, 1879.
Griffin, Charles R.	July 10, 1880.
Griffin, Mrs. Elizabeth	June 21, 1881.
Griffin, Miss F. E.	January 1, 1880.
Griffin, Lizzie M.	September 22, 1879.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Griffin, Martha E.	September 22, 1879.
Grigsby, Phebe E.	November 7, 1878.
Grigsby, Florence	March 28, 1878.
Grimshaw, William R.	October 23, 1879.
Grimsky, Lottie	January 1, 1881.
Guild, Pacific	March 28, 1878.
Gunn, C. E.	March 29, 1881.
Gunn, H. L.	March 29, 1881.
Hagar, Charles R.	June 30, 1881.
Hagen, Louisa	January 1, 1880.
Haile, Cordelia	March 29, 1881.
Hale, Susie	March 29, 1881.
Hall, Alice J.	September 22, 1879.
Hall, Mrs. E.	January 1, 1880.
Hall, Miss F. M.	January 10, 1878.
Hall, George C.	October 10, 1880.
Hall, Henry C.	June 30, 1881.
Hall, Mary C.	July 18, 1878.
Hamill, Kate F.	January 1, 1880.
Hamilton, D. A.	January 1, 1880.
Hamilton, John E.	January 1, 1881.
Hamilton, W. J.	January 1, 1880.
Hamilton, William Joseph	September 22, 1879.
Hamilton, James T.	January 16, 1879.
Hammett, Laura E.	January 10, 1878.
Hammond, William H.	September 22, 1879.
Hammond, S. Estelle	March 28, 1878.
Hammond, Hulda A.	March 28, 1878.
Hanck, Julia L.	March 26, 1879.
Hanlon, Amelia	September 22, 1879.
Hanlon, Emily C.	June 30, 1881.
Hanlon, Mary E.	June 30, 1881.
Hannah, H. O.	April 28, 1879.
Hansbrough, James K.	September 22, 1879.
Hanscom, Nathan C.	March 26, 1879.
Hansford, Thaddeus	January 16, 1879.
Hanson, Annie	January 1, 1880.
Hanson, Mrs. N. S.	March 8, 1877.
Hapgood, Mrs. Emma	March 18, 1880.
Hardenberg, Belle D.	January 1, 1880.
Harkness, George S., Jr.	April 10, 1879.
Harris, Anula	October 1, 1881.
Harris, Miss Lizzie	September 22, 1879.
Harris, Miss S. J.	January 10, 1878.
Harrison, Edward C.	January 1, 1880.
Harrison, James K.	June 30, 1881.
Hart, Jennie	October 10, 1880.
Hart, Mrs. Mary C.	October 10, 1880.
Hartson, D. H.	October 23, 1879.
Hartson, Iola S.	April 10, 1879.
Harvey, Oliver T.	January 16, 1879.
Haskins, Miss Harriet	March 13, 1879.
Havens, Carrie	January 4, 1879.
Havens, H. Roscoe	September 22, 1879.
Hawkins, Mrs. Mary	October 10, 1880.
Hawley, Clara	January 1, 1881.
Hayburn, Annie M.	December 5, 1878.
Hayden, Mrs. Mary E.	November 7, 1878.
Heard, Miss Jennie	October 31, 1878.
Heard, Susan V.	March 18, 1880.
Heath, Alice	March 26, 1879.
Heath, Henry H.	September 22, 1879.
Heaton, Miss Mary C.	January 1, 1880.
Helm, William T. B.	September 22, 1879.
Hemler, Lizzie	August 7, 1879.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Henderson, Miss M. J.	August 29, 1878.
Hendrie, Maggie	March 22, 1881.
Hency, Julia A.	July 18, 1878.
Henley, Clara	January 1, 1880.
Henn, Carrie M.	March 28, 1878.
Henning, David F.	April 10, 1878.
Henning, David F.	March 26, 1879.
Herrod, William	March 29, 1881.
Hess, Tillie F.	October 31, 1878.
Hessian, Katie	January 1, 1881.
Hiatt, Mrs. Henrietta H.	January 16, 1879.
Hickman, J. B.	July 18, 1878.
Hill, Eugenia K.	June 27, 1878.
Hill, Nettie	January 1, 1880.
Hill, Miss Nettie G.	July 18, 1878.
Hill, Mrs. Nettie E. G.	November 7, 1878.
Hilser, Kate	January 1, 1880.
Hilton, Emily H.	July 10, 1880.
Hilton, Stephen	September 22, 1879.
Hinekey, Mrs. A. C.	February 7, 1880.
Hinds, Mrs. Augusta	January 1, 1881.
Hines, Gideon D.	September 22, 1879.
Hinkle, Jacob R.	August 7, 1879.
Hitchcock, Helen M.	September 22, 1879.
Hitchcock, Leroy V.	March 29, 1881.
Hixon, George C.	July 18, 1878.
Hobe, Sophia A.	March 29, 1881.
Hochholzer, Harriet	February 2, 1878.
Hockheimer, Ettie	September 22, 1879.
Hodgkins, Mary P.	March 29, 1881.
Hogan, Mary J.	June 27, 1878.
Holbrook, Anna	September 22, 1879.
Hollenbeck, Minnie B.	March 26, 1879.
Hollingsworth, Maria	April 10, 1879.
Hollopeter, E. E.	July 9, 1881.
Hollron, M. H.	January 1, 1880.
Hollron, Minnie F.	March 30, 1880.
Holman, S. A.	March 29, 1881.
Hopkins, Anna	September 22, 1879.
Hopkins, Kate E.	September 22, 1879.
Hopkins, Lizzie D.	October 1, 1881.
Horne, Miss E. Florence	January 1, 1880.
Horton, George W.	October 3, 1878.
Houn, Ida M.	March 18, 1880.
Housh, William H.	October 23, 1879.
How, Alvin J.	March 22, 1879.
Howard, Millie S.	March 26, 1879.
Howard, William B.	October 1, 1881.
Howe, Mrs. L. J.	March 18, 1880.
Howe, Newton P.	January 1, 1881.
Howe, Miss M. K.	October 10, 1880.
Howell, Henry H.	November 15, 1879.
Howland, Annie	June 30, 1881.
Hoyt, Fannie A.	January 1, 1880.
Hoyt, M. Jennie	March 29, 1881.
Hoyt, Mrs. M. L.	March 29, 1881.
Huell, W. B.	January 1, 1880.
Humphrey, Emily	October 10, 1880.
Humphrey, Ed. C.	January 1, 1880.
Hunt, Cornelia N.	March 29, 1881.
Hunt, Mrs. E. G.	October 10, 1880.
Hunt, M. E.	January 1, 1880.
Hunter, Benjamin	July 23, 1881.
Hunter, John	October 31, 1878.
Hurley, Mamie E.	November 15, 1879.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Hursh, George W.	October 23, 1879.
Hussey, Mary E.	March 18, 1880.
Husteel, Frederic M.	September 22, 1879.
Hutchins, Kate	April 10, 1878.
Hutchinson, Sarah A.	October 13, 1881.
Ingham, Oscar S.	August 26, 1880.
Ingraham, Duncan G.	January 1, 1881.
Inskip, Ph. Seward	September 22, 1879.
Intermillier, Rosina	March 26, 1879.
Irelan, Jennie B.	January 16, 1879.
Isamann, S. G.	January 1, 1880.
Jackman, Mrs. Ann M.	October 10, 1880.
Jackson, Ella A.	March 28, 1878.
Jacobs, Miss R.	February 19, 1878.
Jacobs, Celia	September 22, 1879.
Jacobson, Josephine	October 1, 1881.
Jamison, E. H.	January 1, 1881.
Janvier, Allen E.	April 10, 1879.
Jenkins, Sarah B.	June 30, 1881.
Jewell, W. Jerome	March 28, 1878.
Jewell, Ruby Annie	July 10, 1879.
Jewett, Annie S.	February 8, 1879.
Jewett, Sarah T.	October 4, 1880.
Johns, Mrs. Annie Z.	January 1, 1880.
Johnson, Isabelle	March 28, 1878.
Johnson, Maria I.	January 1, 1880.
Johnson, Rosamond R.	March 5, 1881.
Johnson, Samuel E.	July 18, 1878.
Johnston, Katie F.	January 1, 1880.
Johnstone, Miss Clara	July 12, 1881.
Johonnot, Miss Marian H.	September 22, 1879.
Jonas, Louisa	June 30, 1881.
Jones, Mrs. C. B.	June 1, 1880.
Jones, Mrs. Carey W.	March 8, 1881.
Jones, Nellie R.	March 26, 1879.
Kane, George	June 30, 1881.
Kane, Richard	January 16, 1878.
Kaplan, Marie E.	July 18, 1878.
Keefer, Sallie E.	March 28, 1878.
Keegan, Mary A.	March 24, 1878.
Keith, Elizabeth B.	October 1, 1881.
Keller, L. F.	March 18, 1880.
Keller, Lizzie F.	March 29, 1881.
Kelley, Lizzie	January 1, 1880.
Kelley, Susie E.	January 16, 1880.
Kellogg, Franklin E.	January 10, 1882.
Kellogg, A. E.	February 19, 1878.
Kellogg, F. E.	January 10, 1882.
Kelly, Maggie A.	October 23, 1879.
Kelly, Alicia A.	January 1, 1880.
Kelsy, Jas. M.	March 18, 1880.
Kelso, Luella	January 27, 1881.
Kendall, C. S.	October 10, 1880.
Kendall, Flora C.	January 1, 1881.
Kendall, Marion A.	July 10, 1879.
Kennedy, T. E.	February 4, 1880.
Kenniston, Chas. M.	August 29, 1878.
Kenniston, Mrs. C. M.	November 7, 1878.
Kent, Isabelle B.	March 24, 1878.
Kent, M. F.	July 10, 1880.
Keran, A. P.	January 1, 1880.
Keran, J. N.	January 1, 1881.
Kern, G. A.	June 30, 1881.
Kerr, Miss Margaret	July 10, 1879.
Kessler, Christian	February 19, 1878.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Ketchum, Ariadne G.	March 28, 1878.
Keys, Mary E.	February 19, 1878.
Kidd, Grace E.	October 23, 1879.
Kidder, Mrs. Sophia	January 1, 1881.
Killpatrick, E. C.	December 5, 1878.
King, Miss Florella	October 17, 1878.
King, Jessie I.	March 29, 1881.
King, Mamie	January 4, 1879.
Kingman, Mrs. M. V.	August 29, 1878.
Kingsbury, Lettie	September 22, 1879.
Kinkade, Letitia	July 18, 1878.
Kinsey, Chas. C.	September 22, 1879.
Kirk, Miss Mattie M.	October 23, 1879.
Kirkland, Cordelia S.	January 16, 1879.
Klench, J. F.	October 31, 1878.
Kneedler, Susie E.	March 28, 1878.
Knight, D. S.	March 29, 1881.
Knowlton, Miss L. M.	February 19, 1878.
Kratzer, Miss Sadie	August 26, 1880.
Kraus, Emma F.	April 10, 1879.
Kraus, Sophia M. F.	April 18, 1879.
Labonta, Alice L.	March 18, 1880.
Lachlan, Maria	October 1, 1881.
La Grange, Anna E.	May 22, 1878.
Lalande, Alice	March 29, 1881.
Lalande, Blanche	October 1, 1881.
Lanfranchi, C.	January 22, 1878.
Lang, George	October 1, 1881.
Langan, George	May 22, 1878.
Langworthy, Miss Mary A.	September 22, 1879.
Larkins, E. O.	September 4, 1880.
Larue, Peter	September 5, 1881.
Larue, W. H.	July 18, 1881.
Lastren, Louis H.	July 10, 1880.
Lawson, Lewis B.	March 18, 1880.
Leach, Lizzie S.	March 18, 1880.
Leach, Mira	July 18, 1878.
Leahy, Mary A.	March 26, 1879.
Leary, Joseph	July 10, 1879.
Leete, Christine R.	July 10, 1879.
LeFevre, J. P.	August 26, 1880.
Leffler, Lizzie M.	January 1, 1880.
Leggett, W. Austin	March 29, 1880.
Lehan, M. S.	January 1, 1881.
Leimbach, Albert E.	July 10, 1879.
Leininger, Mrs. John	March 18, 1880.
Leonard, Carrie	March 24, 1878.
Le Vaux, Geo. V.	October 1, 1881.
Levy, Daniel	February 2, 1878.
Lewis, Fannie	January 10, 1878.
Lewis, Julia	January 1, 1881.
Lewis, J. S.	June 30, 1881.
Lewis, J. A.	August 7, 1879.
Lewis, Mary	March 26, 1879.
Lewis, Minnie D.	March 29, 1881.
Lighte, Miss Pauline	March 24, 1878.
Lillie, John B.	August 29, 1878.
Lindberg, Mrs. E. M.	January 1, 1880.
Linscott, John W.	July 10, 1880.
Lipman, Miss M.	February 19, 1878.
Little, David F.	March 26, 1879.
Little, Ella J.	January 1, 1880.
Little, Miss Mary	August 7, 1879.
Littlefield, Miss N. A.	May 17, 1879.
Litton, Anna	June 30, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Lloyd, D. M.	March 18, 1880.
Lloyd, Julius S.	September 22, 1879.
Locke, Ida	March 30, 1880.
London, Jacques	February 2, 1878.
Loofbourrow, Elias	January 16, 1879.
Loop, Mrs. L. J.	January 1, 1880.
Lorain, John	August 15, 1880.
Loring, Martha W.	October 1, 1881.
Loughran, Susan	January 1, 1880.
Love, Mrs. Josie S.	September 22, 1879.
Lovell, Jennie E.	March 21, 1881.
Lowe, Mrs. A.	
Lowell, Emma	October 31, 1878.
Lowell, J. M.	June 20, 1881.
Luhrs, Miss Amelia	October 23, 1879.
Lundt, Jennie C.	January 16, 1879.
Lyman, Byron G.	January 1, 1881.
Lynch, Ada M.	April 10, 1878.
Lynch, Alice	January 1, 1880.
Lynch, W. F.	March 29, 1881.
Lytle, Cinda	October 1, 1881.
Maddux, Mary	January 10, 1878.
Maguer, Mary	January 1, 1880.
Maguire, Louise	October 23, 1879.
Maguen, Ella	January 1, 1880.
Mahoney, Mary A.	July 10, 1879.
Maloney, Katie	October 23, 1879.
Mann, S. J.	October 3, 1878.
Margan, Miss Jennie	October 23, 1879.
Markham, Charles E.	October 3, 1878.
Martin, Charles Q.	April 6, 1880.
Martin, Amelius F.	May 17, 1879.
Martin, Edith	March 28, 1878.
Martin, Kate Nelson	March 26, 1879.
Martin, James S.	June 30, 1881.
Martin, Julia	February 14, 1881.
Martling, James A.	October 10, 1880.
Mast, Miss Regina	September 22, 1879.
Matheson, Grace	October 1, 1881.
Mathews, Mrs. L.	November 13, 1879.
Mathews, Mary	May 22, 1878.
Mathews, Ruth M.	July 10, 1879.
Matthews, M. E.	January 1, 1880.
Matthews, Lucy M.	September 22, 1879.
May, Isabel	March 26, 1879.
Maurer, Clara	January 10, 1878.
McArthur, A. W.	October 23, 1879.
McBrown, Alva	July 10, 1880.
McCann, Maria	January 1, 1880.
McCarthy, Katie	October 10, 1880.
McCarthy, Nettie R.	January 1, 1880.
McCarthy, Mrs. S. L.	October 3, 1878.
McCleery, Lizzie	October 31, 1878.
McClelland, J. L.	March 18, 1880.
McClenahan, D. A.	January 1, 1881.
McClymonds, J. W.	June 30, 1881.
McConnell, Miss H.	October 1, 1881.
McConnell, Ophelia	April 6, 1880.
McCorvan, Blanche	March 29, 1881.
McCoy, A. M.	January 1, 1881.
McCrosky, R. C.	July 10, 1880.
McCulloch, H. E.	March 29, 1881.
McDermott, Annie F.	January 1, 1880.
McDivitt, S. P.	October 3, 1878.
McDonald, J. J.	January 10, 1878.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
McDonald, Mary	March 26, 1879.
McDonnell, Miss Addie	March 18, 1880.
McDonnell, Kate	March 30, 1880.
McDorvill, T. K.	June 30, 1881.
McElroy, Nellie	October 1, 1881.
McFarland, Nellie F.	June 30, 1881.
McFarland, William M.	July 10, 1879.
McFadden, John	January 10, 1878.
McFadden, Agnes	November 7, 1878.
McGauhey, Miss Fannie G.	June 25, 1879.
McGehee, Anna P.	June 30, 1881.
McGeough, Mary V.	January 1, 1880.
McHugh, Peter	June 27, 1878.
McJudoe, Charlotte	July 10, 1880.
McKean, William G.	October 3, 1878.
McKinstry, Clara	January 1, 1881.
McKown, Mrs. M. E.	May 17, 1879.
McKusick, H. P.	December 13, 1877.
McKean, Miss A. M.	February 19, 1878.
McLaughlin Aggie	January 1, 1880.
McLaughlin, Maria D.	January 1, 1880.
McLaughlin, M.	March 18, 1880.
McLean, Alex.	March 20, 1881.
McLean, Dugald	January 1, 1881.
McMillan, W. J.	June 30, 1881.
McMullan, Susan	March 30, 1880.
McNamer, John P.	January 1, 1880.
McPhaill, J. S.	September 22, 1879.
McPherson, Mrs. W.	January 1, 1880.
McQuiddy, W. R.	March 29, 1881.
McStay, Josephine	March 26, 1881.
Mead, Emmeline R.	March 28, 1878.
Meads, Simeon P.	June 30, 1881.
Meek, Annie P.	April 6, 1880.
Menges, Caroline A.	June 7, 1879.
Merchant, Mrs. Lizzie	January 1, 1880.
Merchant, L. C. V. A.	January 1, 1880.
Merrill, Mary K.	January 1, 1881.
Merritt, Isabel	March 18, 1881.
Merwin, Charles E.	July 2, 1881.
Metcalf, Mary F.	May 22, 1878.
Michaelson, Louis C.	January 10, 1878.
Michenor, Mary E.	October 31, 1878.
Miles, Mrs. S. A.	October 10, 1880.
Miley, Annette	March 26, 1881.
Miller, Amanda	March 28, 1878.
Miller, Charles W.	March 28, 1878.
Miller, Emma J.	January 1, 1880.
Miller, Mrs. E. R.	January 1, 1880.
Miller, Frank B.	August 28, 1879.
Miller, J. H.	January 1, 1881.
Miller, Rosa	January 1, 1880.
Miller, Sarah E.	March 26, 1881.
Miller, Sarah E.	August 29, 1878.
Mills, Alice	January 1, 1881.
Mills, Myron	December 5, 1878.
Mitchell, Mrs. E. E.	July 2, 1881.
Mitchell, Katie	March 30, 1880.
Moase, Phebe F.	January 28, 1880.
Mobeck, Charlotte F.	March 19, 1881.
Moody, Ella	January 1, 1880.
Montgomery, Annie	January 1, 1880.
Moore, Fannie A.	January 1, 1880.
Moore, Ira	July 10, 1879.
Moore, Kate	March 29, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Moore, Lulu L.	March 29, 1881.
Moore, Mrs. M. E.	February 8, 1879.
Moore, Maggie	October 1, 1881.
Moore, Maggie	June 30, 1881.
Moore, Mrs. Mary	March 18, 1880.
Moore, Susie D.	March 29, 1881.
Morris, C. W.	June 30, 1881.
Morey, Sabra E.	March 26, 1879.
Morford, S. O.	July 2, 1879.
Morgan, George P.	June 30, 1879.
Morgan, Rose E.	April 28, 1879.
Moroney, Mary E.	January 1, 1880.
Morrill, Mary K.	January 1, 1880.
Morrison, Ellen N.	January 1, 1880.
Morrissey, Mrs. M.	January 1, 1880.
Morton, Carrie L.	October 10, 1880.
Morton Sarah E.	July 18, 1878.
Mower, Edith	September 22, 1879.
Mullens, Miss H.	January 22, 1878.
Mumford, Mrs. M. E.	July 18, 1878.
Munday, M. E. C.	January 1, 1881.
Munson, John P.	July 18, 1880.
Murch, Catrina	March 28, 1881.
Murch, Lila	March 30, 1880.
Murdock, Ella	March 18, 1881.
Murdock, Maria E.	March 28, 1878.
Murphy, Annie L.	March 28, 1878.
Murphy, C. H.	August 26, 1880.
Murphy, Isabelle	April 10, 1878.
Murphy, Nellie	March 18, 1880.
Murray, Cecil Adelaide	June 21, 1881.
Murray, George D.	October 1, 1881.
Murray, Miss Maggie	January 1, 1880.
Muth, Hattie	September 22, 1879.
Myrick, George F.	June 4, 1881.
Nachtman, Miss Justina	February 19, 1878.
Nash, Miss B. S.	July 18, 1878.
Neal, Robert J.	October 1, 1881.
Neary, Annie J.	March 26, 1879.
Nesbitt, Jennie	January 1, 1881.
Newberry, Hattie K.	January 1, 1880.
Newell, Theresa	March 29, 1881.
Newmark, Delia	March 29, 1881.
Nickerson, W. A.	August 28, 1880.
Norris, Laura B.	March 18, 1880.
Norvell, James A.	January 10, 1878.
Noyes, Annie L.	September 22, 1879.
Oakley, Isabella	January 1, 1881.
O'Brien, Juliet F.	September 22, 1879.
Ogilvie, Charlotte A.	February 8, 1879.
Oglesby, M. A.	May 22, 1878.
O'Hara, Kate F.	March 30, 1880.
Oldham, Mrs. T.	June 30, 1881.
O'Leary, Katy R.	May 22, 1878.
Oliver, Joseph C.	July 18, 1878.
O'Loughton, Nellie	May 22, 1878.
Oman, G. W.	October 10, 1880.
O'Neil, I. G.	March 29, 1881.
O'Neil, Mary L.	June 30, 1881.
Ormsbee, Miss Jane	January 17, 1878.
O'Rourke, Maggie	March 28, 1878.
Orr, A. R.	October 23, 1879.
Osmer, Mrs. E. C.	December 13, 1877.
Overacker, Allie P.	March 29, 1881.
Owen, H. D.	June 30, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Owen, Phebe R.	June 22, 1880.
Packard, Lizzie A.	January 16, 1879.
Paden, Thomas H.	January 1, 1880.
Palmer, Anna M.	May 22, 1878.
Palmer, Hettie A.	October 1, 1881.
Palmer, Maggie H.	July 18, 1878.
Panabacker, C. S.	October 1, 1881.
Parker, Miss A. J.	January 1, 1880.
Parker, Flora A.	July 18, 1878.
Parker, Matilda	April 6, 1880.
Parr, John T.	March 18, 1880.
Parshall, Olive A.	January 1, 1880.
Pascoe, William, Jr.	March 26, 1879.
Patchett, Virginia	January 1, 1881.
Patten, Herbert	November 4, 1880.
Patten, Jessie	January 1, 1881.
Patterson, Alma	March 29, 1881.
Patterson, Miss Eliza	January 1, 1880.
Pearce, Mary E.	September 24, 1881.
Peaslee, May E.	September 22, 1879.
Peck, Helen E.	September 22, 1879.
Peckham, Miss M. J.	March 18, 1880.
Peckham, Mary A.	March 30, 1880.
Pedler, Mrs. F. A.	January 16, 1879.
Pelham, Mrs. M. E.	January 1, 1880.
Pelton, Malvina C.	April 10, 1879.
Penniman, Helen N.	March 30, 1880.
Perrigo, Mary J.	May 22, 1878.
Perry, Grace H.	September 22, 1879.
Persing, Georgia	February 2, 1878.
Peter, N. Effie	June 27, 1878.
Pettit, E. T.	July 5, 1881.
Pfeiffer, Laura	July 10, 1879.
Phalin, A. M.	March 29, 1881.
Phelps, Augusta M.	March 13, 1881.
Phillbrook, H. W.	October 1, 1881.
Phillips, Mrs. A. M.	June 27, 1878.
Pierce, Nellie E.	June 30, 1881.
Pieser, Flora	January 1, 1880.
Pinkham, Ella M.	January 1, 1881.
Pitcher, Charlotte M.	October 31, 1878.
Poage, John A.	August 28, 1879.
Poage, Mrs. Lelia S.	September 3, 1881.
Pollard, W. D.	January 1, 1880.
Porter, John N.	September 24, 1881.
Potter, Harriet A.	January 1, 1880.
Potter, Lila L.	September 22, 1879.
Powers, Mattie K.	January 1, 1881.
Pratt, Alexis L.	March 22, 1879.
Pratt, Annie E.	January 1, 1881.
Pratt, Eunice C.	January 1, 1880.
Pratt, Helen M.	October 23, 1879.
Pratt, Orson M.	March 18, 1880.
Preston, Miss Flora	September 21, 1881.
Prewett, James	January 1, 1880.
Primm, E. P.	July 10, 1880.
Pringle, Nellie	July 10, 1880.
Pritchard, Mrs. S. M.	October 10, 1880.
Pritchard, V. P.	July 27, 1880.
Proudfoot, William A.	July 10, 1879.
Pyatt, Mrs. Jennie	March 18, 1880.
Quimby, Minerva	March 29, 1881.
Ramsey, William S.	June 30, 1881.
Randall, Miss F. E.	March 18, 1880.
Randolph, L. N.	June 30, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Raney, Sheldon	March 30, 1880.
Ranlet, May	July 10, 1879.
Raun, Miss Emily	January 1, 1881.
Ray, Maria	November 15, 1879.
Ray, Maria	October 10, 1880.
Rayl, Mrs. Martha	January 16, 1879.
Raymond, Mrs. H. E.	June 4, 1881.
Ready, R. W.	June 30, 1881.
Redding, Dora C.	October 1, 1881.
Reed, Mrs. Mary F.	January 1, 1880.
Rees, Miss Alma	May 11, 1881.
Reilly, M. J.	January 10, 1878.
Rhodes, E. J.	August 29, 1878.
Rich, Nellie L.	March 29, 1881.
Richards, V. P.	March 18, 1880.
Richardson, Carrie S.	June 30, 1881.
Richardson, G. A.	June 30, 1881.
Richmond, H. H.	June 30, 1881.
Rieckes, R. H.	March 19, 1881.
Ries, Dora B.	March 29, 1881.
Riley, Ella	July 10, 1879.
Riley, Ella	March 29, 1881.
Riley, John F.	July 10, 1879.
Riley, P. F.	October 1, 1881.
Rise, Mary E.	April 22, 1880.
Ritter, C. M.	November 27, 1880.
Rixon, Charity A.	May 4, 1881.
Robbins, Philomene	January 1, 1880.
Roberts, B. F.	March 28, 1880.
Roberts, Edith M.	March 29, 1881.
Robinett, Margretta M.	September 22, 1879.
Robinson, Mary E.	August 7, 1879.
Robinson, R. E.	October 10, 1880.
Robinson, W. J.	October 18, 1881.
Roche, Constantine V.	July 18, 1879.
Roche, Annie	July 10, 1879.
Rodden, Mary C.	March 30, 1880.
Rogers, W. J.	March 18, 1880.
Ronald, J. F.	August 7, 1869.
Root, Ellis J.	March 26, 1879.
Root, George E.	March 29, 1881.
Root, Miss Leilla A.	January 10, 1878.
Roscoe, F. H.	June 30, 1881.
Ross, Jane	July 10, 1880.
Ross, M. M.	October 23, 1879.
Rousseau, Mrs. Lida	October 31, 1878.
Rowe, Miss Lizzie	August 7, 1879.
Royce, Ruth	November 7, 1879.
Royce, Ruth	March 29, 1881.
Royce, Ella J.	June 27, 1878.
Ruby, Virginia C.	January 1, 1880.
Ruddock, John C.	May 22, 1878.
Rugg, E. L.	March 18, 1880.
Russell, Frank P.	January 1, 1880.
Russell, Mary F.	March 30, 1880.
Russell, Sadie E.	January 1, 1880.
Ryan, Winifred M.	October 23, 1879.
Sackett, Dudley P.	January 1, 1880.
Said, Ella	March 30, 1880.
Salkeld, Libby	March 29, 1881.
Sanborn, Allau P.	March 29, 1881.
Sargent, Lizzie	March 26, 1879.
Sarles, Mrs. H. W.	January 10, 1878.
Sarvis, G. C.	October 3, 1878.
Saunders, Wesley	June 30, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Savage, M. H.	January 1, 1881.
Savage, Nellie H.	April 20, 1878.
Sawyer, Frances C.	March 30, 1880.
Saxe, Herman A.	October 31, 1878.
Schenck, Emma	March 29, 1879.
Schuck, Hermine	October 1, 1881.
Schull, Julia M.	October 1, 1881.
Scott, J. F.	January 1, 1880.
Scott, Lillie	January 1, 1880.
Scott, S. A.	March 29, 1881.
Scott, W. S.	March 24, 1881.
Seaman, Edward M.	May 17, 1879.
Seaman, Elbert	September 26, 1881.
Seaver, H. N. Jr.	June 30, 1881.
Seavy, Oscar F.	January 10, 1878.
Seeber, Zenaide	May 22, 1878.
Selling, Eugenia	March 29, 1881.
Selling, Nathaniel A.	March 29, 1881.
Seuger, Heinrich	July 10, 1880.
Seward, R. V.	July 20, 1881.
Sharp, Susanna R.	April 25, 1881.
Shaw, Mrs. M. M.	March 18, 1880.
Shaw, Sebastian	March 30, 1880.
Shaw, Theodore S.	July 10, 1879.
Shearer, Flora M.	April 10, 1879.
Shekels, Mrs. Maggie E.	March 29, 1881.
Sherman, Ella I.	September 22, 1879.
Shinn, Charles H.	March 29, 1881.
Shinn, Milicent W.	March 26, 1879.
Shipman, Lilly	January 1, 1881.
Shirley, James W.	March 26, 1879.
Schuck, L. M.	March 18, 1880.
Siddons, Kate	March 29, 1881.
Silliman, C. H.	May 31, 1881.
Simmons, Robert J.	January 1, 1881.
Simons, J. A.	October 10, 1880.
Sisson, Caroline M.	August 7, 1879.
Sisson, Caroline M.	January 1, 1880.
Slack, Clay H.	October 31, 1878.
Slater, Charlotte	April 10, 1878.
Slaven, Thomas H.	September 22, 1879.
Smalley, Mrs. H. H.	July 10, 1879.
Smith, Annie	January 1, 1881.
Smith, Albert A.	September 22, 1879.
Smith, F. H.	June 30, 1881.
Smith, Eleanor M.	October 31, 1878.
Smith, James	March 29, 1881.
Smith, Julia	January 1, 1880.
Smith, John W.	June 27, 1878.
Smith, J. A.	August 7, 1879.
Smith, Lyman D.	October 31, 1878.
Smith, Mary H.	January 1, 1881.
Smith, Stanley A.	September 22, 1879.
Smith, Sylvia A.	March 18, 1880.
Smith, Virginia E.	March 18, 1880.
Smith, Wilburn	January 1, 1880.
Snedaker, Eunice I.	March 29, 1881.
Snell, Richard B.	January 16, 1879.
Snow, Melvin	June 30, 1881.
Snow, Thacher N.	September 22, 1879.
Soule, Maria L.	November 1, 1878.
Southeimer, J. J.	October 31, 1878.
Soward, Frank D.	July 18, 1878.
Spiers, Jane C.	June 30, 1881.
Sprague, Josie E.	March 29, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Spring, Mrs. Fannie	October 31, 1878.
Sprott, Maggie	February 18, 1878.
Squires, Mary E.	June 30, 1881.
Stafford, Henry C.	March 29, 1881.
Standeford, Mrs. N. D.	January 10, 1878.
Stata, Annie M.	January 1, 1880.
Stearnes, Hannah P.	January 1, 1881.
Stephens, John	July 10, 1880.
Stevens, Miss Annie	February 19, 1878.
Stevens, Miss Eliza	July 10, 1880.
Stevenson, B. E.	January 1, 1880.
Stewart, Charlotte T.	January 1, 1881.
Stewart, Eliza J.	March 29, 1881.
Stewart, Robert	September 4, 1880.
Steles, R. T.	July 10, 1879.
Stincen, Miss E. E.	February 19, 1878.
Stine, Vincent	July 20, 1880.
Stockton, Adelia A.	March 20, 1879.
Stockton, Alice L.	March 30, 1880.
Stohr, Miss Tillie	November 15, 1879.
Stone, Miss Ethel	March 18, 1880.
Stone, Henrietta	April 10, 1879.
Stone, Jeannette M.	March 30, 1880.
Stone, Martha	January 1, 1880.
Stone, Maria P.	January 1, 1881.
Stovall, Annie M.	June 30, 1881.
Stovall, Mrs. M. E.	June 30, 1881.
Stowell, E. M.	January 1, 1880.
Stowell, F. H.	October 1, 1881.
Strange, Miss Maria	March 18, 1880.
Stratton, Ida A.	June 30, 1881.
Stratton, Lewis M.	June 4, 1881.
Stringfield, James	March 29, 1881.
Strode, Victor R.	September 4, 1880.
Sturges, Daniel B.	October 1, 1881.
Sturges, Selden	January 4, 1879.
Sullivan, C. G.	March 29, 1881.
Sullivan, Nellie F.	October 1, 1881.
Sullivan, Nora G.	October 1, 1881.
Sullivan, Theresa M.	October 1, 1881.
Summers, Mrs. S. H.	January 1, 1880.
Sumner, Henrietta	November 15, 1879.
Swain, Emily	September 22, 1879.
Swain, Orlando E.	April 10, 1878.
Swan, Amanda	April 10, 1878.
Swan, Emma D.	March 18, 1880.
Swasey, Alice	March 18, 1880.
Sweeney, Timothy E.	July 10, 1879.
Sykes, Mary J.	
Tade, Laura A.	January 1, 1880.
Teaford, Nannie A.	March 29, 1881.
Tanner, Olive D.	June 27, 1878.
Taylor, Catherine	November 7, 1878.
Taylor, Mary A.	March 28, 1878.
Taylor, Mary F.	September 22, 1879.
Taylor, Miss Olivia	April 10, 1878.
Thaxter, Clara E.	March 19, 1881.
Thayer, Rose	October 1, 1881.
Thomas, E. O.	March 18, 1880.
Thomas, Elizabeth	October 10, 1880.
Thomas, M. Elizabeth	October 3, 1878.
Thompson, Ettie L.	January 1, 1881.
Thompson, Helena A.	May 22, 1878.
Thompson, Jessie B.	January 1, 1881.
Thompson, Mary R.	January 1, 1881.

FIRST GRADE CERTIFICATS—Continued.

NAME.	Expires.
Thompson, O. M.	August 3, 1880.
Thompson, Sadie	January 1, 1880.
Thompson, Sarah E.	March 1, 1881.
Thorp, J. H.	March 18, 1880.
Tiedman, Dora	January 1, 1880.
Tiffany, A. J.	March 18, 1880.
Titus, Frank H.	January 10, 1878.
Titus, Miss M. J.	September 25, 1881.
Toll, Mrs. Sarah	October 23, 1879.
Toothaker, Miss M. O.	August 28, 1879.
Townsend, Beulah	October 1, 1881.
Toy, Emma	March 26, 1879.
Treuholtz, Nettie	January 1, 1881.
Trimble, Caroline	March 30, 1880.
Tuck, George H.	October 23, 1879.
Tucker, Ida A.	October 3, 1878.
Tully, James	October 1, 1881.
Tunnell, Byron J.	April 10, 1878.
Turner, Belle J.	March 26, 1879.
Turner, Eva	March 29, 1881.
Turner, Harriet	June 30, 1881.
Turner, Mary	March 29, 1881.
Tuttle, Mira A.	January 1, 1880.
Tyler, Ada M.	May 22, 1878.
Tyus, Mary A.	December 5, 1878.
Upton, Clara E.	January 1, 1881.
Umes, Ferdinand A.	March 29, 1881.
Uisinger, Conrad	March 29, 1881.
Valencia, Lydia E.	January 20, 1881.
Van Guelder, Bertie	January 1, 1880.
Varnach, Mrs. E. P.	October 1, 1881.
Veroe, James	January 1, 1880.
Vervalin, Dempster	July 10, 1879.
Vincent, M. E.	July 10, 1880.
Wade, Nettie	June 30, 1881.
Wade, S. E.	September 6, 1881.
Walbridge, Jennie M.	September 27, 1878.
Waldron, Helen R.	January 1, 1880.
Waldron, S. A.	February 19, 1878.
Walker, Cornelia	June 30, 1881.
Walker, Clara M.	March 29, 1881.
Walker, Christopher	September 22, 1879.
Wall, Miss Clara	August 29, 1878.
Wallace, Alma	December 5, 1878.
Wallace, George W.	January 16, 1878.
Wallis, Florence L.	June 30, 1881.
Walsh, Ida C.	September 22, 1879.
Walter, Emelyn	July 18, 1878.
Walton, Mrs. Clara	March 18, 1880.
Warboys, John W.	July 10, 1880.
Ward, Miss Alice B.	September 22, 1879.
Ward, Edith Z.	January 15, 1881.
Ward, Mary A.	May 22, 1878.
Ward, Wilbur	June 8, 1881.
Warnick, James W.	January 1, 1880.
Warren, E. N.	March 18, 1880.
Wash, William A.	March 28, 1878.
Washburne, Mrs. Georgia	March 18, 1880.
Waterbury, Charles	January 1, 1881.
Watkins, Florence M.	March 26, 1879.
Watson, Miss M. H.	May 22, 1878.
Watson, Mary	January 1, 1880.
Watts, Nellie G.	July 10, 1878.
Way, Mary Alice	January 1, 1880.
Wear, Belle A.	March 18, 1880.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Weaver, J. H. G.	July 10, 1879.
Webb, Mrs. M. E. W.	May 16, 1879.
Webber, Fred. E.	January 20, 1881.
Webster, Reginald H.	October 1, 1881.
Weed, Ida B.	October 1, 1881.
Weeks, Annie C.	April 10, 1878.
Weeks, Geo. W.	July 10, 1879.
Weeks, M. L.	October 31, 1878.
Weeks, M. L.	May 31, 1879.
Weeks, Mrs. J. M. L.	October 10, 1880.
Weir, Helen M.	January 1, 1880.
Welch, George W.	July 10, 1879.
Wells, Addie H.	March 24, 1878.
Wells, Alice M.	March 26, 1879.
Wells, Harry C.	October 1, 1881.
Welsh, James E.	June 30, 1881.
Wenk, Robert E.	July 18, 1878.
Wenk, Wilbur F.	March 29, 1881.
Westerfield, J. F.	June 30, 1881.
Wharton, Ann S.	September 3, 1881.
Wharton, J. F.	January 1, 1880.
Wheaton, Miss Clara	April 10, 1879.
Wheeler, Mrs. J. D.	February 2, 1878.
Wheeler, Mary L.	March 19, 1881.
Whelan, Ella E.	March 30, 1880.
White, Alice M.	September 22, 1879.
White, Alice M.	March 30, 1880.
White, Clarence M.	July 30, 1880.
White, Lily H.	June 30, 1881.
White, Mattie H.	April 10, 1879.
White, Mrs. Wm.	August 26, 1880.
Whitehurst, Thos. W.	July 10, 1879.
Whitely, Emma	March 24, 1881.
Whiting, Julia M.	March 28, 1878.
Whiting, S. P.	October 10, 1880.
Whittier, Emma	January 1, 1880.
Wible, Anna A.	March 26, 1879.
Wible, Julia F.	March 26, 1879.
Wicks, John T.	June 27, 1878.
Wideman, James	January 10, 1878.
Wilber, Kate	March 18, 1880.
Wilbur, E. W.	January 1, 1880.
Wilder, Mary L.	October 23, 1879.
Wilder, Susan W.	October 23, 1879.
Wiley, Maggie L.	March 29, 1881.
Williams, Carrie	March 18, 1880.
Williams, Clara B.	March 29, 1881.
Willmer John	December 13, 1877.
Wilson, E. A.	April 10, 1879.
Wilson, George W.	January 1, 1881.
Wilson, E.	March 26, 1879.
Wilson, J. L.	September 23, 1881.
Wilson, Sarah M.	December 13, 1877.
Wilson, Wm. R.	March 26, 1879.
Winchester, Mrs. W. H.	August 29, 1878.
Witherby, Emma	June 30, 1881.
Witherow, Samuel A.	January 1, 1880.
Wixson, Julius S.	June 30, 1881.
Wolcott, Emma	March 18, 1880.
Wolfe, Mary E. G.	July 18, 1878.
Wolverton, Bruce	January 1, 1880.
Wolverton, Bruce	April 4, 1881.
Wood, Annie R.	June 30, 1881.
Wood, C. T.	July 10, 1879.
Wood, William D.	January 1, 1881.

FIRST GRADE CERTIFICATES—Continued.

NAME.	Expires.
Wood, Winnie J.	June 30, 1881.
Woodbridge, Eva.	October 10, 1880.
Woodbridge, Mary.	January 1, 1881.
Woodbury, W. W.	March 29, 1881.
Woodland, Isabella.	August 31, 1881.
Woodman, S. Marie.	July 10, 1880.
Woods, Miss Bettie.	June 30, 1881.
Woods, Miss Theo.	March 18, 1880.
Woodson, Mary.	January 1, 1881.
Woodward, N. L.	March 28, 1878.
Wooll, H. L.	October 3, 1878.
Workman, O. P.	October 3, 1878.
Workman, Oliver P.	March 30, 1880.
Wright, Abby.	February 2, 1878.
Wright, Mary.	July 2, 1881.
Wurtenburg, Marianne.	March 29, 1881.
Wyatt, John O. B.	June 30, 1881.
Yager, Myron.	February 9, 1881.
Yarnall, Bennett.	January 1, 1881.
Yates, T. M.	June 30, 1881.
York, John Jr.	March 18, 1880.
Young, Nestor A.	February 19, 1878.
Younger, Maggie.	July 18, 1878.
Youngman, A. M.	May 17, 1881.

SECOND GRADE CERTIFICATES.

NAME.	Expires.
Achley, Mollie E.	January 1, 1880.
Acton, Wm.	March 18, 1879.
Anderson, Christienna.	March 22, 1879.
Anderson, Mrs. Emma M.	May 22, 1880.
Anderson, Jennie M.	October 18, 1879.
Anderson, Miss N. C.	January 1, 1879.
Andrews, Kate E.	September 22, 1878.
Angell, Inez B.	March 2, 1880.
Anthony, Sallie M.	January 1, 1880.
Armor, Mrs. A. L.	April 10, 1878.
Armstrong, C. B.	July 10, 1879.
Arndt, Clara.	March 29, 1880.
Arndt, Clara.	October 1, 1880.
Ashley, Marian.	March 29, 1880.
Ashley, M. Alice.	October 1, 1880.
Ashton, John.	March 17, 1880.
Atkins, Edward S.	January 1, 1879.
Auld, Eliza.	March 22, 1879.
Auld, Eliza F.	March 29, 1880.
Bacon, Mrs. A. A.	July 10, 1879.
Bagnall, Annie.	January 1, 1880.
Bailey, Lydia A.	January 16, 1878.
Bailey, N. A.	July 10, 1878.
Baldwin, Josie E.	July 10, 1878.
Ball, Eunice.	January 1, 1879.
Barey, Eliza E.	October 18, 1879.
Barry, Sarah D.	January 1, 1879.
Bartholomew, Rachel.	March 18, 1879.
Batchelder, Emma F.	September 22, 1878.
Beach, Sarah.	March 22, 1879.
Beatty, G. W.	March 18, 1879.
Beckett, J. T.	July 10, 1879.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Beekwith, Nathan	January 1, 1880.
Bell, Lizzie	March 29, 1880.
Bennett, Minnie E.	October 1, 1880.
Bentley, Geo. H.	October 1, 1880.
Bernard, Ida L.	January 1, 1879.
Berry, James H.	January 10, 1880.
Bigelow, Mrs. S. H.	October 10, 1879.
Birch, Mary F.	June 30, 1880.
Bishop, Charles E.	October 1, 1880.
Bixby, Maggie C.	March 18, 1879.
Blackman, G.	January 16, 1878.
Blythe, Alice	March 29, 1880.
Bodkin, John G.	August 28, 1878.
Bodwell, Etta M.	April 10, 1878.
Bodwell, E. M.	June 30, 1880.
Bodwell, Harry W.	June 30, 1880.
Boland, Jeanne M. A.	January 1, 1879.
Bonham, H. M.	March 18, 1879.
Bonnard, Helen A.	April 10, 1878.
Booth, Cora	September 22, 1878.
Booth, Ella N.	January 1, 1880.
Booth, Ella N.	October 10, 1880.
Boyd, Susie	September 22, 1878.
Bradbury, Geo. F.	October 10, 1879.
Brandt, Louise J.	July 10, 1878.
Brett, Jas. Robert	September 22, 1878.
Brett, Mabel	October 1, 1880.
Brown, Annie	October 10, 1879.
Brown, C. L.	October 10, 1879.
Brown, Ellis C.	March 29, 1880.
Brown, Emma	October 1, 1880.
Brown, Jennie L.	June 30, 1880.
Brown, L. W.	October 1, 1880.
Brown, Sarah A.	March 18, 1879.
Brown, Wm. W.	January 1, 1880.
Brothers, Geo. A.	October 10, 1879.
Bunker, Louise	October 10, 1879.
Burke, Kate J.	October 1, 1880.
Burritt, Dwight N.	September 22, 1878.
Burscough, Lizzie	January 16, 1878.
Burscough, Lizzie	April 10, 1878.
Burston, Selina	January 1, 1880.
Bush, Lizzie R.	January 1, 1880.
Bush, Lizzie R.	March 29, 1880.
Butler, Benj. F.	June 30, 1880.
Cady, Mary C.	October 1, 1880.
Cahill, Thos. E.	April 10, 1878.
Campbell, Kate A.	January 16, 1878.
Cannon, Miss M. F.	July 10, 1879.
Carnes, Marion	July 10, 1879.
Casey, Katie F.	January 1, 1879.
Catlin, Amelia G.	October 1, 1880.
Cave, Hattie	May 22, 1880.
Chapin, Ida Jessie	September 22, 1878.
Chapman, Adelbert R.	March 22, 1879.
Chappell, Mattie E.	March 29, 1880.
Charnock, Della	March 18, 1879.
Chipman, Lucy	March 22, 1879.
Ciprico, Elenor L.	March 29, 1880.
Clapp, Fronie T.	April 10, 1878.
Clark, Robt. M.	January 17, 1880.
Clawson, Wm. F.	January 16, 1878.
Cleary, Louise E.	March 22, 1879.
Clow, Amelia B.	May 22, 1880.
Coffinan, Nelson B.	March 29, 1880.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Cohen, Miss Carrie	October 1, 1880.
Cole, W. H. B.	September 26, 1880.
Coleman, Fannie E.	January 1, 1879.
Coleman, Mrs. D. M.	April 10, 1878.
Congdon, Miss A. R.	January 16, 1880.
Conlin, Thomas	June 30, 1880.
Connors, Mary J.	September 22, 1878.
Cook, Harriet L.	July 10, 1878.
Cooney, Ellen	April 10, 1880.
Cooper, Mary	June 30, 1880.
Corson, Miss Mae E.	January 1, 1879.
Coulter, James	June 26, 1878.
Covilland, Chas. J.	March 17, 1880.
Cowley, Florence	January 1, 1880.
Cozens, Kate	March 29, 1880.
Crawford, Alonzo	January 16, 1878.
Crawford, Alonzo	April 10, 1878.
Cressy, Willis E.	July 10, 1879.
Crittenden, J. L.	March 18, 1879.
Croke, Maggie S.	October 10, 1879.
Cromwell, Frank A.	October 1, 1880.
Crowley, Mary E.	March 29, 1880.
Crowley, Mary E.	October 1, 1880.
Culverwell, Katie	March 29, 1880.
Currier, Adeline S.	March 29, 1880.
Curry, Maggie	October 1, 1880.
Curtiss, Ada M.	March 29, 1880.
D'Ancona, Charlotte A.	September 22, 1878.
Daley, Mary	March 29, 1879.
Danks, Julia A.	January 1, 1879.
Davis, Maria	July 10, 1879.
Day, Miss E. A.	March 18, 1879.
DeForest, Priscilla L.	March 29, 1879.
Delano, Garrie C.	January 1, 1879.
Denton, Flora	October 10, 1879.
Dickinson, Marie T.	April 10, 1878.
Dillon, Miss Maggie L.	March 18, 1879.
Dingle, C. E.	January 1, 1879.
Donnelly, Mary K.	March 29, 1879.
Donovan, Laura B.	September 22, 1878.
Donovan, Mary	June 30, 1879.
Doom, Fannie	June 30, 1879.
Dorsey, Miss Mary L.	June 10, 1878.
Douglas, James I.	March 29, 1879.
Dowling, Jennie E.	October 1, 1879.
Doyle, Wilbur F.	July 10, 1879.
Driscoll, Miss Kate	January 1, 1879.
Driscoll, Mary	January 1, 1879.
Dudley, Miss Lydia F.	September 22, 1878.
Dunn, Chauncey H.	January 1, 1879.
Dunphy, Sallie Powers	September 22, 1878.
Dwyer, Annie M.	October 1, 1879.
Eames, Zilpha	July 10, 1879.
Eaton, Effie D.	September 22, 1878.
Edson, Adelaide E.	March 18, 1879.
Edwards, Mary E.	October 10, 1879.
Edwards, Miss Priscilla	January 1, 1879.
Egenhoff, W. D.	March 18, 1879.
Emery, Cordelia	June 30, 1880.
Erzgraber, Emma	October 1, 1880.
Fagan, Mary	January 16, 1878.
Fallon, Katie	January 1, 1880.
Farquar, C. S.	July 10, 1878.
Fay, Mary A.	September 22, 1878.
Fay, Mary A.	June 30, 1880.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Fay, Mary A.	October 1, 1880.
Fisher, P. M.	June 30, 1880.
Folger, Miss E. L.	January 1, 1880.
Ford, Anna M.	July 10, 1879.
Ford, Mrs. Ella M.	September 22, 1878.
Frasce, Mattie J.	June 30, 1880.
Fullard, Agnes	June 30, 1880.
Fuller, Hattie	January 1, 1880.
Fuller, Mary L.	August 4, 1879.
Fulton, Miss A. M.	March 18, 1879.
Gamble, J. A.	July 10, 1879.
Gardner, Mrs. M. H.	March 18, 1879.
Garvey, Lizzie E.	October 10, 1879.
Gates, Miss Addie	March 18, 1879.
Gates, Alice A.	March 18, 1879.
Gates, Mrs. Sophia B.	April 10, 1878.
Gates, Mrs. Sophia B.	January 16, 1878.
Gesford, Hy. C.	March 30, 1879.
Gesford, Louise	January 1, 1879.
Gibbs, C. Cynthia	March 21, 1880.
Gibbs, George J.	January 16, 1878.
Giddings, Laura C.	March 29, 1880.
Giffin, E.	October 1, 1880.
Gillespie, Luella	September 2, 1880.
Gilman, Julia A.	January 1, 1880.
Gilmore, Forest A.	October 1, 1880.
Givens, Laura M.	March 22, 1879.
Gladding, Miss Lydia H.	July 10, 1878.
Gober, Miss Lucie	January 1, 1879.
Goggin, Emily K.	March 29, 1880.
Goldsmith, Ada	October 10, 1879.
Goldstein, Miss Amelia	March 18, 1879.
Gould, F. N.	March 18, 1879.
Gould, F. N.	July 10, 1879.
Gower, Mary L.	October 1, 1880.
Graffelman, Lucinda	October 30, 1880.
Graham, Mollie	January 1, 1877.
Gregory, Mary F.	March 29, 1880.
Groome, Nellie	January 1, 1879.
Gunn, C. E.	January 1, 1880.
Hagerman, A. B.	January 1, 1879.
Hail, Felix Grundy	September 2, 1878.
Hale, Susie	July 10, 1879.
Hale, Susie	October 10, 1879.
Hampton, Henry C.	June 30, 1880.
Hamilton, Maggie	October 31, 1880.
Haney, F. J.	January 1, 1880.
Hankenson, John B.	March 13, 1878.
Hanseom, George Tyler	January 16, 1878.
Hardy, Mrs. M. M.	October 10, 1879.
Harmon, Alice C.	March 18, 1879.
Harrigan, Annie	March 29, 1880.
Harrison, Edward C.	July 10, 1878.
Hart, Bergie	January 1, 1880.
Haskins, Joseph M.	March 18, 1879.
Hastings, Carrie	January 1, 1879.
Hawes, Sarah E.	January 1, 1880.
Hawley, E. W.	June 30, 1880.
Hay, Luella	January 1, 1879.
Hazen, Leonora	March 18, 1879.
Henley, Belle	January 1, 1879.
Henry Libbie S.	January 16, 1878.
Hession, Katie	October 10, 1879.
Higgins, Benjamin F.	January 1, 1879.
Hilton, Stephen	July 10, 1879.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Hinkelbein, Josephine	April 10, 1878.
Hisom, George	January 1, 1879.
Hockheimer, Julia	September 22, 1878.
Hollingsworth, Emma	January 1, 1879.
Hopkins, Thomas P.	September 22, 1878.
Hopkins, Thomas P.	March 18, 1879.
Hornick, Nora H.	March 29, 1880.
Horshott, Andrew	October 1, 1880.
Howard, Annie L.	October 1, 1880.
Howe, Mindero K.	September 22, 1878.
Hull, A. J.	January 16, 1878.
Hunt, Abbie L.	September 22, 1878.
Hunter, Rosa V.	January 10, 1880.
Hurley, Mammie E.	September 22, 1878.
Hyde, Mary E.	October 10, 1879.
Jackman, Florence	October 1, 1880.
Jackson, George A.	October 1, 1880.
Jacobson, Harriet	June 30, 1880.
Janison, Artie J.	March 29, 1880.
Jehu, Marian	January 1, 1879.
Jenkins, Sarah B.	March 28, 1880.
Jewett, William J.	June 30, 1880.
Johnson, Julian W.	July 18, 1880.
Johnson, Samuel	January 16, 1878.
Johnston, Lizzie	September 22, 1878.
Jonas, Fannie E.	June 30, 1880.
Jones, Mrs. C. B.	July 10, 1878.
Jones, Newman	April 10, 1878.
Josey, Miss Bessie	October 31, 1880.
Josey, Miss Emma	October 31, 1880.
Joslin, Minnie F.	June 30, 1880.
Kalisber, Sophia	March 29, 1880.
Karsky, Miriam	September 22, 1878.
Karsky, Sarah	January 1, 1880.
Karsky, Sarah	June 30, 1880.
Kelley, Thomas	October 1, 1880.
Kellogg, Charles M.	March 29, 1880.
Kelso, Iretta A.	March 29, 1880.
Kendall, Mrs. C. S.	September 22, 1878.
Kennedy, Mary A.	October 1, 1880.
Kent, Margaret A.	March 29, 1880.
Kerr, Mrs. A. B.	June 30, 1880.
Kervan, Lulu	January 1, 1879.
King, Ida	March 18, 1879.
Kinley, M.	June 30, 1880.
Koen, Mary E.	July 10, 1878.
Koen, Mary E.	January 1, 1879.
Kofer, Miss Mary A.	September 22, 1878.
Krause, Fred. L.	October 1, 1880.
Lachlin, Maria E.	March 30, 1880.
Laerone, Thomas W.	March 18, 1879.
Lalande, Blanche L.	March 30, 1880.
Lambert, Jennie	March 30, 1880.
Lands, George C.	October 10, 1879.
Lane, E. R.	March 18, 1879.
Larew, Peter	January 1, 1879.
Larew, W. H.	January 1, 1879.
Leary, Belle S.	October 28, 1880.
Leary, Mary A.	March 29, 1880.
Lenton, Miss Annie	January 1, 1888.
Leslie, Lillie	March 18, 1879.
Lervis, J. H.	March 18, 1879.
L'Hote, Mrs. M. F.	March 18, 1879.
Libbie, Georgie	March 29, 1880.
Lipowitz, Mrs. Ellen	July 10, 1878.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Little, Katie A.	January 1, 1879.
Little, Lizzie B.	September 22, 1878.
Lloyd, Julius A.	July 10, 1878.
Loring, Martha W.	September 22, 1878.
Longnecker, George H.	September 22, 1878.
Lowry, Agnes	March 30, 1880.
Lucas, M. Ada	September 22, 1878.
Lufkin, Harry	March 18, 1879.
Lynch, William F.	April 10, 1878.
Mackenzie, Louise	January 1, 1879.
Madden, Jennie Loretta	September 22, 1878.
Maguire, Rosa A.	June 30, 1880.
Mallory, Ida R.	July 10, 1878.
Maloney, Lena J.	October 10, 1879.
Manley, George P.	January 15, 1880.
Martin, Miss Ada	April 10, 1878.
Martin, J. A.	June 30, 1880.
Martin, Joseph G.	January 1, 1879.
Mattuck, Mary	March 18, 1879.
Maxwell, Mary E.	June 30, 1880.
Mayo, Minnie A.	January 1, 1879.
McAdams, W. C.	August 26, 1879.
McCann, Pearl	March 18, 1879.
McCauly, Mary A.	October 10, 1879.
McClish, M. Annie	September 12, 1878.
McCourt, James	June 30, 1880.
McElroy, Nellie	January 1, 1880.
McFarland, Florence	August 31, 1880.
McFarland, Lucy M.	August 31, 1880.
McFarland, Nellie F.	September 22, 1878.
McFarland, Nellie F.	March 29, 1880.
McGeough, Mary V.	September 22, 1878.
McIntosh, Mrs. Katie	January 1, 1879.
McKee, J. E.	March 18, 1879.
McKnight, Samuel M.	March 15, 1880.
McLean, Dugald	March 18, 1879.
McMullan, Emily	March 29, 1880.
McMullan, Frances	March 29, 1880.
McNear, L.	June 30, 1880.
McPherson, W. G.	August 4, 1879.
Megahan, A.	January 1, 1880.
Megahan, A.	June 30, 1880.
Merrill, Mary K.	September 22, 1878.
Merrill, Mrs. M. D.	June 30, 1880.
Miles, Mrs. N. Anna	September 22, 1878.
Miller, Lavinia L.	June 30, 1880.
Miller, Miss C. E.	April 10, 1878.
Miller, Minnie E.	September 22, 1878.
Miller, Mary K.	March 29, 1880.
Millett, Libbie W.	January 16, 1878.
Miranda, Petra C.	June 27, 1880.
Mize, E. J.	January 1, 1880.
Mize, E. J.	June 30, 1880.
Mize, E. J.	October 1, 1880.
Moore, William P.	March 29, 1880.
Morgan, H. J.	August 4, 1879.
Morris, Lizzie L.	March 29, 1880.
Morse, Miss Cora	September 22, 1878.
Morse, Frederick J.	October 10, 1879.
Morse, Georgie C.	March 29, 1880.
Morton, Miss Ella J.	March 18, 1879.
Morton, Mary	March 18, 1879.
Moses, Hattie A.	July 10, 1878.
Moynihan, Nora T.	September 22, 1878.
Munday, Charles F.	October 10, 1879.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Murphy, Miss E. M.	June 30, 1880.
Myrick, Ella	January 1, 1879.
Myrick, Lizzie B.	January 1, 1879.
Neff, M. C.	June 30, 1880.
Noritzky, —	July 10, 1878.
Norton, F. C.	January 1, 1880.
O'Brien, Frances	March 29, 1880.
O'Brien, Rosa H.	September 22, 1878.
O'Neal, Agnes L.	June 30, 1880.
Orman, George W.	March 18, 1879.
Ortega, David M.	August 4, 1879.
Orth, Clara L.	July 18, 1880.
Owen, M. C.	January 1, 1880.
Packer, Etta	June 30, 1880.
Palmer, Hettie A.	October 10, 1879.
Parden, R. A.	October 1, 1880.
Parker, B. Jr.	January 1, 1879.
Parker, Edwin A.	October 1, 1880.
Parker, Rose S.	June 30, 1880.
Parsons, Annie M.	June 1, 1879.
Partsch, Herman	January 1, 1880.
Partsch, Herman	June 30, 1880.
Patterson, Isabella	January 16, 1878.
Patton, Mattie A.	September 22, 1878.
Peabody, Miss Mary C.	January 1, 1879.
Perkins, Alice	March 18, 1879.
Perry, E. H.	October 1, 1880.
Pettit, E. T.	February 14, 1880.
Phelps, Hannah J.	July 18, 1880.
Phillips, Laura J.	January 1, 1879.
Pike, Anna M.	January 1, 1879.
Pond, C. Lillian	March 29, 1880.
Quinn, Amelia F.	October 1, 1880.
Randolph, Miss L. W.	October 10, 1879.
Raney, Oren N.	March 29, 1880.
Ray, Maria	January 16, 1878.
Ray, Maria	April 10, 1878.
Rector, J. K.	October 10, 1879.
Reeve, E. H.	October 1, 1880.
Regan, Sadie	January 1, 1880.
Reynolds, Fannie L.	October 1, 1880.
Richards, George E.	January 1, 1880.
Richardson, Clara C.	March 29, 1880.
Riley, James A.	March 29, 1880.
Robbins, Philomena	September 22, 1878.
Roberts, Benjamin F.	January 16, 1878.
Robinett, Margretta M.	January 16, 1878.
Robinett, Minna	September 22, 1878.
Robinson, Eliza	January 1, 1880.
Robinson, Emma	March 29, 1880.
Rockwood, Josephine	January 10, 1878.
Rockwood, Josephine	January 10, 1880.
Rodhan, B.	January 17, 1880.
Rolfe, Eugene	September 22, 1878.
Root, A. M.	August 4, 1879.
Rowe, George P.	January 1, 1879.
Rowe, George P.	March 18, 1879.
Russell, Carrie H.	January 1, 1880.
Ryan, F. D.	March 18, 1879.
Ryder, I. S.	March 18, 1879.
Sallee J. W.	January 16, 1878.
Salsig, Annanda	March 18, 1879.
Sampson, Francis C.	October 1, 1880.
Sanborn, Nancy M.	January 16, 1878.
Scherer, Mary A.	June 30, 1880.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Schnuck, Hermin	June 30, 1880.
Scott, Henry W.	January 1, 1880.
Scott, Lillie	September 22, 1878.
Sears, Lizzie	January 1, 1879.
Seavy, Mabel	March 29, 1880.
Seeley, Nettie	March 18, 1879.
Shannon, Katie M.	January 1, 1880.
Sharkey, Sarah H.	September 22, 1878.
Shaw, Mattie J.	October 1, 1880.
Shea, Mary F.	January 1, 1879.
Shepherd, Addie C.	October 11, 1880.
Shepherd, Nellie M.	January 1, 1879.
Sherman, Sue V.	March 18, 1879.
Shinn, Charles H.	July 10, 1878.
Short, M. L.	October 1, 1880.
Shufer, A. C.	March 18, 1879.
Simpson, G. W.	March 18, 1879.
Simpson, J. H.	March 17, 1880.
Simmons, Miss Mary P.	September 22, 1878.
Singley, Helen A.	January 1, 1879.
Smeltzer, M. J.	March 18, 1879.
Smith, Miss Ella J.	July 10, 1878.
Smith, James	July 10, 1878.
Smith, L. M.	June 30, 1880.
Smith, Miss V. M.	January 3, 1879.
Smyth, Anna	June 30, 1880.
Smyth, Anna M. F.	June 30, 1880.
Smythe, Annie M.	January 1, 1880.
Somerset, Clara J.	January 1, 1880.
Soule, Mande	March 29, 1880.
Spooner, Ida	October 1, 1880.
Spring, E. W.	January 1, 1879.
Squier, Emma	October 1, 1880.
Stafford, R. L.	January 1, 1880.
Stanford, Belle M.	January 1, 1880.
Stanley, Albert	June 30, 1880.
Stebbins, Minnie	June 30, 1880.
Stevens, Gertrude	January 1, 1879.
Stewart, Jessie M.	January 16, 1878.
Stewart, John	January 1, 1880.
Stine, P. M.	July 20, 1879.
Stockton, L. D.	March 18, 1879.
Stockton, L. D.	January 1, 1880.
Stockton, William	March 29, 1880.
Stone, Carrie O.	April 10, 1880.
Stone, Hannah E.	March 29, 1880.
Stovall, Miss Annie	March 18, 1879.
Stovall, Fred. W.	March 29, 1880.
Strange, Miss Emma M.	January 16, 1878.
Strawbridge, Miss Viola	May 28, 1879.
Strawbridge, Viola	June 30, 1880.
Strawbridge, Viola	October 1, 1880.
Stull, C. H.	January 1, 1880.
Sturtevant, Sarah C.	July 10, 1878.
Sullivan, Nora G.	January 16, 1878.
Sullivan, Michael F.	March 29, 1880.
Sullivan, Miss Nellie F.	March 18, 1879.
Sweeney, Cassie	January 1, 1879.
Sweeney, Minne	October 1, 1880.
Talmage, Minnie	April 10, 1880.
Taney, L. K.	March 29, 1880.
Taylor, Miss Frankie	January 16, 1878.
Thomason, Annie A.	January 1, 1879.
Thompson, G.	March 18, 1879.
Thompson, Robert A.	January 1, 1880.

SECOND GRADE CERTIFICATES—Continued.

NAME.	Expires.
Thurston, Alice E.	March 29, 1880.
Thyes, Josie	January 1, 1879.
Tibbitts, Mrs. Elizabeth B.	January 16, 1878.
Tobin, Margaret	January 1, 1880.
Traynor, Mary E.	January 1, 1879.
Turner, Mary	January 1, 1880.
Underwood, Mary C.	January 16, 1878.
Unger, Annie	June 30, 1880.
Vollman, Bertha T.	June 30, 1880.
Voris, Mrs. Elizabeth M.	July 10, 1878.
Vrooman, Emily M.	January 16, 1878.
Wade, Miss Kitty	March 18, 1879.
Wadsworth, Carrie M.	January 1, 1879.
Walborn, Adie E.	July 10, 1879.
Wales, Fred. H.	January 1, 1880.
Wall, Benjamin	October 10, 1879.
Walsh, Maggie M.	September 22, 1878.
Walsh, Mary T.	September 22, 1878.
Ward, Delia	July 10, 1878.
Warring, Hattie	March 29, 1880.
Webb, Delia	July 10, 1878.
Weed, Ida B.	March 29, 1880.
Weeks, Mattie A.	June 30, 1880.
Wells, H. C.	July 14, 1880.
Wessell, Willimma	January 1, 1880.
Westphal, Mary	March 29, 1880.
Wetmore, Octavia	September 22, 1878.
Wheeler, Mary E.	September 22, 1878.
Wheelock, Miss E. M.	January 10, 1880.
Whitecomb, Jessie B.	January 1, 1879.
White, Winifred	January 1, 1880.
Wickliff, Elvina	March 24, 1880.
Wileox, Katie	September 22, 1878.
Wild, Mrs. Maggie H.	April 10, 1878.
Willey, Oscar F.	July 10, 1879.
Williams, Eugene	January 1, 1880.
Wilson, Lewis	March 29, 1880.
Wing, Florence D.	August 28, 1878.
Wiseman, Mary L.	September 22, 1878.
Wixon, Eugene	January 1, 1880.
Wood, Annie R.	March 29, 1880.
Wood, Miss Bettie	January 1, 1880.
Woolsey, Georgia	June 30, 1880.
Wyatt, J. O. B.	January 1, 1880.

THIRD GRADE CERTIFICATES.

NAME.	Expires.
Adams, Lucy	June 30, 1879.
Adams, Lucy A.	January 1, 1879.
Allen, Mary J.	October 1, 1879.
Anderson, Nettie H.	October 1, 1879.
Aniser, Emelie	March 29, 1879.
Aram, Mattie	January 1, 1879.
Arndt, Clara	January 1, 1879.
Atterbury, Eva	January 1, 1879.
Augustine, Ella	January 1, 1878.
Bailey, Jane	October 1, 1879.
Barber, Emma J.	June 30, 1879.
Barber, Emma J.	October 1, 1879.

THIRD GRADE CERTIFICATES—Continued.

NAME.	Expires.
Barmann, Rebecca	January 1, 1879.
Bashman, Minnie C.	October 10, 1878.
Beane, Emma H.	March 18, 1878.
Beane, Emma H.	January 16, 1879.
Bennett, Emma	January 1, 1879.
Bird, Lillian	March 18, 1878.
Black, Gertrude S.	October 1, 1879.
Black, Gertrude L.	March 29, 1879.
Blackington, Cora A.	January 1, 1879.
Blakeslee, Emily W.	June 30, 1879.
Block, Valence	October 1, 1879.
Brady, Mary E.	March 29, 1879.
Brier, Carry	January 1, 1878.
Brigham, Henrietta M.	March 28, 1879.
Brimhall, M. C.	March 18, 1878.
Bristoll, Helen G.	June 30, 1879.
Brown, Emma H.	June 30, 1879.
Brown, Julia C.	June 30, 1879.
Brown, Julia A.	October 1, 1879.
Bruns, Hattie	October 1, 1879.
Buell, Katie	March 29, 1879.
Burke, K. L.	June 30, 1879.
Burke, Kittie	January 1, 1879.
Burke, Miss L.	March 29, 1879.
Butts, Etta	March 29, 1879.
Bynon, Ella J.	January 1, 1879.
Campbell Eva A. C.	March 29, 1879.
Cannon, Marilla	January 1, 1879.
Carr, Ursula	January 1, 1878.
Carruthers, Agnes	January 1, 1879.
Carruthers, Agnes G.	March 29, 1879.
Chappell, Mattie E.	March 29, 1879.
Cheney, Lizzie A.	July 10, 1878.
Church, Emma F.	January 1, 1879.
Church, Emma F.	March 29, 1879.
Clayton, Ida M.	March 29, 1879.
Code, Mrs. Emma S.	January 1, 1878.
Coffin, Fannie	January 1, 1879.
Cohen, Alice H.	June 30, 1879.
Congdon, M. Frances	July 10, 1878.
Copeland, Laura	October 1, 1879.
Corbell, Lulu	January 1, 1878.
Corbell, Sarah L.	June 30, 1879.
Cowles, Ida E.	June 30, 1879.
Cowley, Florence	October 10, 1878.
Craig, M. B.	October 1, 1879.
Crocker, Nettie	January 1, 1879.
Crowley, Katie H.	June 30, 1879.
Crowley, Lizzie	January 1, 1879.
Crowley, Mary L.	March 29, 1879.
Crowley, Mary L.	October 1, 1879.
Cuffee, Frances A.	July 10, 1879.
Curran, Mrs. Mary K.	January 1, 1878.
Daly, Cecilia A.	January 1, 1878.
D'Ancona, Rebecca I.	January 1, 1878.
Danforth, Lizzie	March 18, 1878.
Davidson, Fannie	January 1, 1879.
Derrick, Ruth M.	January 1, 1879.
Desmond, Maggie	March 29, 1879.
Dewar, Miss Annie F.	March 18, 1878.
DeWolf, Addie A.	March 29, 1879.
Dickerson, Nellie	March 18, 1878.
Dixon, Belle	January 1, 1879.
Donovan, Laura B.	January 1, 1878.
Douglas, Effie	March 29, 1879.

THIRD GRADE CERTIFICATES—Continued.

NAME.	Expires.
Dowling, Jennie E.	June 30, 1879.
Driscoll, Mary	October 10, 1878.
Easterday, S. Frankie	January 1, 1879.
Effey, Agnes	January 1, 1879.
Elliott, Mary A.	June 30, 1879.
English, Rebecca F.	October 1, 1879.
Evans, Annie	January 1, 1878.
Fallon, Kate	October 10, 1878.
Farmar, Mary	March 29, 1879.
Fisk, Annie C.	March 29, 1879.
Fitzsimmons, Rosa A.	October 1, 1879.
Fogg, Ella F.	March 29, 1879.
Fountain, M. Izora	March 29, 1879.
Fried, Delia	June 30, 1879.
Frontin, Lizzie	March 29, 1879.
Fulda, Annie	January 1, 1879.
Fuller, Emma E.	October 1, 1879.
Fuller, Marilla H.	July 10, 1878.
Furley, Ella	October 1, 1879.
Gallagher, Cora	June 30, 1879.
Garness, Belle	January 1, 1879.
Gibson, Miss Ollie	March 18, 1878.
Glanville, Laura	June 30, 1879.
Goggin, Emily K.	January 1, 1879.
Good, Emma	March 29, 1879.
Gower, Mary L.	January 1, 1878.
Gracier, A. J.	June 30, 1879.
Gracier, Emma F.	January 1, 1878.
Graham, Mollie	March 18, 1878.
Green, Mrs. A. H.	October 1, 1879.
Griffith, Alice L.	January 1, 1878.
Griffith, Belle	March 18, 1878.
Hamilton, Lizzie	October 10, 1878.
Hammond, Jennie M.	March 18, 1877.
Hanlon, Mary E.	January 1, 1879.
Harris, Bertha L.	October 1, 1879.
Harris, Susie	January 1, 1879.
Harroll, Mollie	March 18, 1879.
Hart, Jennie	October 1, 1879.
Haskins, Rosa	January 1, 1879.
Hawley, Clara M.	October 31, 1878.
Heath, Eva	October 10, 1878.
Hemion, M. E.	March 18, 1878.
Herrington, Hettie	October 1, 1879.
Hess, Laura	January 1, 1878.
Hills, Lulu S.	March 29, 1879.
Howard, Louise B.	March 29, 1879.
Howe, Katie	October 1, 1879.
Houston, Mary A.	January 1, 1879.
Houston, Mary A.	October 1, 1879.
Hudson, Myrtie	March 18, 1878.
Hurley, Miss M. E.	March 18, 1878.
Hurley, M. F.	October 1, 1879.
Hyde, Abbie	March 29, 1879.
Johnson, Annie M.	January 1, 1879.
Jones, Mrs. J. C.	January 1, 1879.
Jones, Sallie	January 1, 1879.
Kean, Annie M.	January 1, 1879.
Keeler, Alice	January 1, 1879.
Keeley, Maria	January 1, 1879.
Keith, Elizabeth B.	June 30, 1879.
Kelly, Mary	March 29, 1879.
Kervan, Miss Ida M.	March 18, 1878.
Kilgore, Mira	March 18, 1878.
Kimball, Rebecca M.	March 29, 1879.

THIRD GRADE CERTIFICATES—Continued.

NAME.	Expires.
King, Mrs. A. M. H.	January 1, 1878.
Kirby, Georgiana B.	January 1, 1879.
Kraus, Bertha	January 1, 1879.
Lalande, Blanche	March 29, 1879.
Lang, Mary E.	January 1, 1878.
Larkins, Katie F.	June 30, 1879.
Lewis, Frances R.	October 1, 1879.
Loomis, Mary	January 1, 1879.
Lovejoy, Mrs. Belle N.	January 16, 1879.
Lowry, Agnes	March 29, 1879.
Lowry, Isabel	March 29, 1879.
Lowry, Isabel	June 30, 1879.
Luchsinger, Annie	March 29, 1879.
Maccord, Louise	January 1, 1879.
Macy, Lizzie	June 30, 1879.
Mahoney, Annie	October 1, 1879.
Mahoney, Elinor	October 1, 1879.
Marston, Mrs. M. E.	July 10, 1878.
Majors, Rachel	January 1, 1879.
McCarthy, Minnie E.	March 29, 1879.
McCarthy, Nellie M.	October 1, 1879.
McElroy, Nellie	October 10, 1879.
McElroy, Nellie	March 29, 1879.
McElwee, Katie	January 1, 1879.
McEwen, Mrs. L. M.	October 1, 1879.
McGreevy, E. J.	July 10, 1878.
McLean, Anna	July 10, 1879.
McNamara, Agnes	June 30, 1879.
McNevin, Mary A.	July 10, 1879.
Melvin, Nettie J.	March 1, 1879.
Menken, Lena J.	March 18, 1878.
Merrill, Mamie C.	March 18, 1878.
Miller, Mary R.	January 1, 1879.
Moar, Lucy	March 29, 1879.
Morehouse, Nellie	January 1, 1879.
Morey, Fannie	June 30, 1879.
Moose, Nellie	July 10, 1878.
Moose, Nellie	July 10, 1878.
Morris, Lizzy	June 30, 1879.
Morrison, Mary E.	January 1, 1879.
Morton, Sarah E.	January 1, 1879.
Mury, Lili	October 1, 1879.
Neill, Mrs. Susie F.	March 18, 1878.
Nellis, Lulu	March 18, 1879.
Nelson, Adelia	January 1, 1879.
Newell, Theresa	January 1, 1879.
Nickell, Louise	March 18, 1878.
North, E. M.	July 10, 1879.
O'Brien, Lucy	October 1, 1879.
O'Connell, Nellie A.	October 1, 1879.
O'Donnell, Rebecca J.	January 1, 1879.
O'Donnell, Sarah F.	January 16, 1879.
Otis, Ava	January 1, 1879.
Owen, Harriet D.	March 29, 1879.
Paddock, Etta L.	October 10, 1878.
Patton, Jessie	October 10, 1878.
Patton, Libbie	October 1, 1879.
Poole, Ella M.	October 1, 1879.
Powers, Mattie K.	October 10, 1878.
Purrington, Nellie	January 1, 1879.
Purrington, Nellie	October 1, 1879.
Randolph, Miss L. M.	March 18, 1878.
Reed, Ellen	March 18, 1878.
Richardson, Carrie E.	March 29, 1879.
Roberts, Miss E. M.	March 18, 1878.

THIRD GRADE CERTIFICATES—Continued.

NAME.	Expires.
Robinson, Flora	March 18, 1878.
Rogers, Ada B.	June 30, 1879.
Runyon, Mabel	July 10, 1878.
Rutherford, Mary H.	January 1, 1879.
Rutherford, Mary A.	January 1, 1879.
Ryan, Belle	June 30, 1879.
Ryan, Belle	October 1, 1879.
Scars, Lizzie W.	March 18, 1878.
Seymour, Mrs. E. M.	January 1, 1879.
Shararar, Lizzie	January 1, 1879.
Sharp, Martha	January 1, 1879.
Simmons, Mary B.	January 1, 1879.
Singley, Jennie M.	March 18, 1878.
Smith, Annie M. F.	October 10, 1878.
Smith, Fannie	March 18, 1878.
Smith, Julia E.	March 29, 1879.
Soule, Miss Maud	October 10, 1878.
Spooner, Ida B.	June 30, 1879.
Sproul, Clara	October 1, 1879.
Stebbins, Mrs. E. C.	October 1, 1879.
Stivers, Laura	March 29, 1879.
Stivers, Laura	October 1, 1879.
Still, Mary	March 18, 1878.
Stone, Agnes	March 18, 1878.
Stone, Mary G.	March 29, 1879.
Stovall, Mrs. M. E.	October 18, 1878.
Strange, Jennie	January 1, 1879.
Sullivan, Nora	January 1, 1878.
Temple, Nora	October 10, 1878.
Thompson, Belle E.	July 10, 1878.
Thompson, Berta	March 29, 1879.
Thurston, Emma L.	March 18, 1878.
Travers, Katie J.	June 30, 1879.
Turner, Katie J.	June 30, 1879.
Wallace, Florence L.	March 18, 1878.
Ward, Fannie	January 1, 1878.
Warren, Mrs. E. N.	June 30, 1879.
Weed, Annie F.	January 1, 1879.
Weed, Ida B.	June 30, 1879.
Wells, Miss Alice	March 18, 1878.
Wells, Alice	March 29, 1879.
Wells, Miss Lizzie	March 18, 1878.
White, Winifred	July 10, 1878.
White, Winifred	October 10, 1878.
Wilson, Emma A.	January 1, 1879.
Witherby, Emma F.	March 29, 1879.
Wolfe, Ida H.	January 1, 1878.
Wood, Lottie E.	March 29, 1879.
Woods, Susie M.	October 31, 1878.
Woodson, Mary	July 10, 1878.
Wulff, B. A.	October 1, 1879.

LIST OF COUNTY SUPERINTENDENTS,

Whose term of office expires the first Monday in March, 1878, and their Post-offices.

Counties.	NAMES.	Post-offices.
Alameda	W. F. B. Lynch	Oakland.
Alpine	R. H. Ford	Silver Mountain.
Amador	A. Norton	Jackson.
Butte	Arthur McDermott	Oroville.
Calaveras	Charles R. Beal	San Andreas.
Colusa	Samuel Houchins	Colusa.
Contra Costa	A. Thurber	Pacheco.
Del Norte	R. S. McLellan	Cresecent City.
El Dorado	John P. Munson	Placerville.
Fresno	R. H. Bramlet	Fresno.
Humboldt	E. C. Cummings	Rohnerville.
Inyo	John W. Symmes	Independence.
Kern	L. A. Beardsley	Bakersfield.
Lake	Louis Wallace	Lakeport.
Lassen	S. A. Doyle	Janesville.
Los Angeles	Thomas A. Saxen	Los Angeles.
Marin	Samuel Saunders	San Rafael.
Mariposa	Richard Kane	Mariposa.
Mendocino	John C. Ruddock	Ukiah.
Merced	B. F. Fowler	Merced.
Modoc	W. T. Estes	Centerville.
Mono	David Jeffreys	Bridgeport.
Monterey	R. C. McCroskey	Salinas City.
Napa	L. Fellers	Napa City.
Nevada	E. M. Preston	Nevada City.
Placer	Eugene Calvin	Auburn.
Plumas	W. S. Church	Greenville.
Sacramento	F. L. Landes	Sacramento.
San Benito	T. S. Burnet	Hollister.
San Bernardino	Charles R. Paine	San Bernardino.
San Diego	E. N. Pauley	San Diego.
San Francisco	H. N. Bolander	San Francisco.
San Joaquin	S. G. S. Dunbar	Stockton.
San Luis Obispo	J. M. Felts	San Luis Obispo.
San Mateo	G. P. Hartley	Redwood City.
Santa Barbara	G. E. Thurmond	Santa Barbara.
Santa Clara	F. Rousseau	Santa Clara.
Santa Cruz	W. H. Hobbs	Santa Cruz.
Shasta	Mrs. D. M. Coleman	Shasta.
Sierra	A. M. Phalin	Scales' Diggings.
Siskiyou	William Duenkel	Yreka.
Solano	C. W. Childs	Suisun City.
Sonoma	A. C. McMeans	Santa Rosa.
Stanislaus	W. B. Howard	Modesto.
Sutter	M. C. Clark	Yuba City.
Tehama	E. S. Campbell	Red Bluff.
Trinity	Mary N. Wadleigh	Junction City.
Tulare	R. P. Merrill	Portersville.
Tuolumne	Rose R. Morgan	Columbia.
Ventura	F. S. S. Buckman	San Buenaventura.
Yolo	H. B. Pendegast	Woodland.
Yuba	Th. H. Steele.	Marysville.

LIST OF COUNTY SUPERINTENDENTS

Taking office the first Monday in March, 1878, and their present Post-offices.

Counties.	NAMES.	Post-offices.
Alameda	J. C. Gilson	Pleasanton.
Alpine	Mrs. Anna L. Spencer	Silver Mountain.
Amador	Adam Edsinger	Amador City.
Butte	Jesse Wood	Oroville.
Calaveras	Charles R. Beal	San Andreas.
Colusa	Samuel Houchins	Colusa.
Contra Costa	E. L. Wemble	Antioch.
Del Norte	John McVay	Smith's River.
El Dorado	John P. Munson	Placerville.
Fresno	R. H. Bramlet	Fresno.
Humboldt	J. B. Casterlin	Hydesville.
Inyo	J. W. Symmes	Independence.
Kern	E. E. Calhoun	Bakersfield.
Lake	James Shirley	Lakeport.
Lassen	Z. N. Spalding	Susanville.
Los Angeles	W. P. McDonald	Los Angeles.
Marin	S. M. Augustine	San Rafael.
Mariposa	Richard Kane	Mariposa.
Mendocino	John C. Ruddock	Ukiah City.
Merced	L. D. Stockton	Merced.
Modoc	E. P. Grubbs	Adin.
Mono	William T. Elliotts	Bridgeport.
Monterey	R. C. McCroskey	Salinas City.
Napa	H. C. Gesford	Napa City.
Nevada	George E. Robinson	North Bloomfield.
Placer	O. F. Seavy	Forest Hill.
Plumas	F. G. Hail	Crescent Mills.
Sacramento	F. L. Landes	Sacramento.
San Benito	A. Martin	Hollister.
San Bernardino	James A. Rousseau	San Bernardino.
San Diego	E. T. Blackmer	San Diego.
San Francisco	A. L. Mann	San Francisco.
San Joaquin	S. G. S. Dunbar	Stockton.
San Luis Obispo	F. E. Daike	Cambria.
San Mateo	G. P. Hartley	Redwood City.
Santa Barbara	G. E. Thurmond	Carpenteria.
Santa Clara	L. J. Chipman	San José.
Santa Cruz	W. H. Hobbs	Santa Cruz.
Shasta	Mrs. D. M. Coleman	Shasta.
Sierra	J. S. Wixson	Gibsonville.
Siskiyou	Henry A. Morse	Yreka.
Solano	J. K. Bateman	Dixon.
Sonoma	E. W. Davis	Santa Rosa.
Stanislaus	W. H. J. Robinson	Modesto.
Sutter	O. E. Graves	Yuba City.
Tehama	E. S. Campbell	Red Bluff.
Trinity	Mary N. Wadleigh	Weaverville.
Tulare	W. P. Kirkland	Visalia.
Tuolumne	I. J. Potter	Sonora.
Ventura	D. D. DeNure	San Buenaventura.
Yolo	H. B. Pendegast	Woodland.
Yuba	Thomas H. Steele	Marysville.

[APPENDIX H.]

CALIFORNIA STATE NORMAL SCHOOL.

OFFICE OF THE BOARD OF TRUSTEES OF THE STATE NORMAL SCHOOL. }
 SAN JOSÉ, June 30th, 1877. }

To His Excellency,

WILLIAM IRWIN,

Governor of California:

SIR: In accordance with the requirements of the Political Code, we have the honor to submit the annual report of the Board of Trustees of the School, for the year beginning July first, eighteen hundred and seventy-six, and ending June thirtieth, eighteen hundred and seventy-seven.

Very respectfully, your obedient servants,

C. T. RYLAND, Vice-President.

CHAS. H. ALLEN, Secretary.

REPORT.

FINANCIAL STATEMENT.

During the twenty-eighth fiscal year we have had the administration of the following moneys, appropriated by the State, to wit:

Twenty-four thousand dollars for the current expenses of the school, five hundred dollars for library purposes, and eight thousand dollars for repairing and furnishing the building.

The sum of twenty-four thousand dollars has been expended as follows:

Salaries of Teachers, Janitor, and Librarian	\$21,443 00
Insurance on building for \$50,000 00	625 00
Stationery	560 03
Fuel	668 37
Sundries	226 45
Balance on hand June 30th, 1877	477 15

Total appropriation	\$24,000 00
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The sum of five hundred dollars has been expended as follows:

Books and apparatus	\$359 25
Balance on hand June 30th, 1877	140 75

Total appropriation	\$500 00
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In the completion, repair, and furnishing of the building, we have expended the sum of

\$8,188 09

Of this sum, ninety-one dollars was received for useless material, sold, and ninety-seven dollars and nine cents from the Tuition Fund.

For a more detailed statement of all these expenditures, and the work done, we call attention to the full report of the Building Committee, of the Treasurer, and Executive Committee, herewith transmitted.

SCHOLASTIC WORK.

For the organization of the Faculty and a full statement of the internal working of the school, we refer your Excellency to the catalogue and circular of the school for the year eighteen hundred and seventy-six-seven, and to the report of the Principal, contained therein, all herewith submitted.

From these it will be seen that there has been a constant and rapid increase in the number in attendance, and of the number fitted for the work of teaching. The average enrollment for the twenty-sixth fiscal year was two hundred and thirty-nine; for the twenty-seventh fiscal year, three hundred and sixty-two—an increase of more than one hundred and twenty.

This increase has necessitated the employment of additional teachers and an increase of the amount used for supplies. We are, however, happy to be able to report that we have carried the school through, on the appropriations made, and that no deficit will have to be provided for the twenty-eighth and twenty-ninth fiscal years.

REQUIREMENTS FOR THE THIRTIETH AND THIRTY-FIRST FISCAL YEARS.

Should the growth of the school continue, as there is every reason to believe it will, we shall need, to conduct the school creditably, a much larger appropriation, nor do we hesitate to ask it,

as we believe the State is receiving back, many fold, all that is here expended in training teachers.

We submit the following estimates of the annual expenditures, necessary for the two coming years. They are based upon the reasonable expectancy of an increase in attendance, and we pledge ourselves to a thoroughly economic expenditure of the same:

For teachers' salaries and other current expenses-----	\$32,000 00
For apparatus-----	800 00
For books for library-----	500 00
Total-----	\$33,300 00

We are sure that when the work the school is doing is compared with that of other State Institutions, this requirement will be considered reasonable, and will be cheerfully granted.

WASHINGTON SQUARE.

The building stands nearly in the center of Washington Square, a beautiful location, of twenty-eight acres, in the heart of the city, donated to the State by San José, for the Normal School. It is, as yet, almost entirely unimproved. With a moderate appropriation for the purpose, these grounds might be made the most beautiful in the State. Here should be gathered every tree and shrub, indigenous to the State, that will thrive in this locality, the grounds being made, in this respect, an exhibition of the wealth of California.

So far, the State has done nothing toward improving the grounds, and we therefore ask that such an appropriation as may seem fitting be made for this purpose. A comparatively small sum, expended annually, would soon make the grounds a credit to the State, rather than, as now, a marked exhibition of its neglect.

CALENDAR—1877-8.

FIRST TERM.

Opens August 7th, and closes December 20th.

Holiday vacation from December 21st to January 7th, inclusive.

SECOND TERM.

Opens January 8th and closes May 23d.

PROGRAMME FOR THE CLOSING WEEK.

Final examinations, oral—Monday, Tuesday, and Wednesday, May 20th, 21st, and 22d.

Address before literary societies, Wednesday evening.

Graduating exercises, Thursday, at two o'clock P. M.

Alumni Association literary exercises, Thursday evening.

CONDITIONS OF ADMISSION.

For admission to the Junior Class, the following qualifications are requisite:

1. *Age*.—If ladies, sixteen; if gentlemen, seventeen years.

2. *Certificates*.—A valid certificate, State or county, of any grade.

3. *Examinations*.—A limited number, for the present, may be admitted on examination. They must present certificates of good moral character, and pass an examination such as would be required to obtain a Third Grade Certificate. A certificate entitles the applicant to admission, but *all* pupils are examined, on entering the school, for classification. For the Junior Class, they are examined only in Spelling, Reading, Geography, Elements of Arithmetic, and Elements of Grammar. For entrance to Advanced Classes, in *all the studies* of the preceding classes.

All pupils are examined monthly, and if they show either incapacity or unwillingness to do the required work, are assigned to lower classes, or excused from attendance.

None are admitted to the Senior Class under seventeen years of age.

Pupils may be admitted to the Junior, or Middle Classes, at any time during the year, but all applicants for admission to the Senior Class should present themselves at the beginning of the year, *as none are graduated who have not been one year in attendance in the school*. This is necessary in order to receive the necessary instruction in Methods of Teaching.

Applicants for admission are required to make and sign the following declaration: "I hereby declare that my purpose in entering the School is to fit myself for teaching, and that I intend to teach in the Public Schools of California," and to make a deposit of FIVE DOLLARS, which will be refunded when they leave, if clear of the books of the Librarian, and if there are no charges for injury to reference books, building, or furniture.

Those who are unable to pass the preliminary examination for admission to the Normal School, can enter the Preparatory Class, until qualified. In this class a tuition fee is required.

COURSES OF INSTRUCTION.

ELEMENTARY COURSE.					FULL COURSE.	
JUNIOR YEAR.		MIDDLE YEAR.			SENIOR YEAR.	
1—LANGUAGE -----	Orthography. English Grammar.	Orthography. English Grammar.	Orthography. English Grammar.	Word Analysis. Composition.	Rhetoric.	Criticism and Eng- lish Literature.
2—MATHEMATICS ----	Mental and Written Arithmetic.	Written Arithmetic.	Arithmetic. Elementary Algebra.	Arithmetic. Algebra.	Higher Algebra.	Geometry and Trig- onometry.
3—SCIENCE -----	Geography.	Elements of Natural Philosophy. Phys. Geography.	Natural Philosophy completed. Chemical Lectures.	Physiology. Zoology. Botany.	Chemistry. Lectures on Astron- omy and Geology.	Household Science.
4—MISCELLANEOUS --	Penmanship. Drawing.	Reading. Vocal Music.	U. S. History. Reading. Vocal Music.	School Law and Con- stitution.	General Review of Elementary Stud- ies.	Political Economy. Reading. Drawing.
5—PROFESSIONAL ----				Methods of Teaching. Observation in the Training School.	Methods of Teach- ing.	Methods of Teach- ing. Practice in the Train- ing School.

BIENNIAL REPORT

OF THE

REGENTS OF THE UNIVERSITY

OF CALIFORNIA,

FOR THE YEARS 1875-7.

REPORT.

UNIVERSITY OF CALIFORNIA, }
BERKELEY, August 1st, 1877. }

To His Excellency,
WILLIAM IRWIN,
Governor of California:

DEAR SIR: In pursuance of the law, and of the instructions of the Board of Regents, I herewith transmit to you the Biennial Report of the Regents of the University of California for the two years included between July first, eighteen hundred and seventy-five, and July first, eighteen hundred and seventy-seven.

Very respectfully yours,

ROBERT E. C. STEARNS,
Secretary of the Regents of the University.

REPORT.

To the Honorable, the Board of Regents of the University of California:

GENTLEMEN: In conformity with the requirements of section one thousand four hundred and thirty-two, paragraph seventeen, of the Political Code of California, I herewith present the following Report on "the progress, condition, and wants of each of the Colleges embraced in the University."

JOHN LECONTE,
President.

University of California, Berkeley, June 30th, 1877.

I.—COLLEGES IN THE UNIVERSITY.

The University embraces seven courses of study, commonly called "Colleges," namely:

In Science: Agriculture, Mechanics, Engineering, Chemistry, Mining, and Medicine. (1)

In Letters: Classical, and Literary.

For the Colleges in Science, as well as for the literary course in the College of Letters, the degree given at the close of the course is that of Bachelor of Philosophy. For the Classical Course, the degree is that of Bachelor of Arts; in the Medical College, the degree is Doctor of Medicine.

The Scientific Courses correspond very closely with the modern courses established in the institutions of other States which received the congressional grant of eighteen hundred and sixty-two. They are intended to give the student a good preparation for the pursuits of Agriculture, Mining, Engineering, Mechanics, and Chemistry. The studies of the first two years are very nearly the same in all these Colleges. In the last two years the special studies predominate.

The Literary Course is based upon History and the general scientific studies, including Mathematics, Physics, Chemistry, Geology, etc.; Modern Languages, including Anglo-Saxon, English, French, and German, with the option of others.

(1) The College of Medicine is in San Francisco; it is under a separate Faculty, and is self-supporting. The California College of Pharmacy has been affiliated with the University, retaining its own organization. Neither of these Colleges receive any part of the State appropriations.

The Classical Course corresponds closely with that of Classical Colleges at the East.

CLASSES OF STUDENTS.

The students at Berkeley are not only enrolled in separate Colleges, but in each College they may enter in regular or special courses. The regular courses are strongly recommended instead of special courses, to those who want a thorough and systematic education. The special courses are adapted to those who desire to acquire proficiency in a single branch, or who are unable to remain long enough to pursue a full course.

Special Course Students.—Those are thus designated who take up but one or two lines of study, and they are not required to pass the general examinations for admission. They need only to satisfy the Instructors in their specialties that they are qualified to profit by the exercises of the class. The permission is accorded only to those who have already made a considerable proficiency in knowledge. Access may thus be obtained to some scientific course, to the chemical laboratory, to instruction in some modern language, etc.

Students at Large.—Students who give all their time to special studies are designated as Students at Large. They are subject to all the regulations of the University, and are expected to make up for themselves a full schedule of study, approved by the Faculty. They will be required to pass the same entrance examination as candidates for the Colleges of Science, and may, by vote of the Faculty, be admitted as candidates for degrees.

Optional Studies.—Students already proficient in the studies laid down in the general scheme which they are following, or who have extra time at their disposal, may pursue optional studies, with the permission of the Faculty; or they may attend lectures and exercises appointed for other sections of the University, if it does not conflict with their regular appointments.

NOTE.—Regular students who may fail to maintain their standing in one of the four classes will not be permitted, except in extraordinary cases, to take the position of Special Students.

TERMS OF ADMISSION—FOR THE COLLEGES OF SCIENCE.

Candidates must pass a satisfactory examination in Higher Arithmetic, in all its branches, including the extraction of square and cube roots, and the metric system of weights and measures; Algebra, to Quadratic Equations; Geometry, first four books (Davies' Legendre or Loomis); English Grammar, Rhetoric, Geography, and History of the United States.

It is believed that these requirements can be met by a bright and determined scholar residing in any part of the State. The proper text-books are easily procured. The examination is meant to be thorough and strict, but it is not meant to be so technical or exacting as to deter scholars who have not had the best advantages of tuition. Students who show a capacity to pursue with profit the course marked out, are sometimes admitted on condition that they will make up their deficiencies. At the same time, thorough preparation, where it can be had, is of the greatest importance. Parents and teachers are earnestly requested to give good counsel in this respect to those who are coming to the University.

The following suggestions are made for the guidance of those who are able to do no more than master the requisites above stated:

Although no requirements in Natural Science are specified, the study of Local Botany, Mineralogy, and Natural History is earnestly recommended, both because of the knowledge which may be acquired, and because of the habits of accurate observation of nature which may thus be formed in early youth.

Students are advised to devote at least one year to the study of Latin before entering this department. It will greatly help their acquisition of Modern Languages, and will be useful in their study of science. Allen & Greenough's Grammar and Reader are especially commended as good manuals for this purpose.

Proficiency in some one or more of the Modern Languages is also very desirable.

FOR THE COLLEGE OF LETTERS.

(1) *Classical Course*.—Candidates must pass a satisfactory examination in the same studies as candidates for the Colleges of Science, and in the following *additional* studies: Latin Grammar, including prosody; Caesar, four books; Virgil, Eclogues, Georgics, and six books of the *Aeneid*; Cicero, six orations; Greek Grammar, including prosody; Xenophon's *Anabasis*, four books; Homer's *Iliad*, two books (omitting the catalogue). For the *Anabasis* equivalents will be accepted from Goodwin's Greek Reader.

Candidates will also be examined in the first forty-five pages of Allen & Greenough's Latin composition, and in Jones' Greek Composition, or in their equivalents.

(2) *Literary Course*.—Candidates must pass a satisfactory examination in the same studies as candidates for the Colleges of Science, and, in addition, in the Latin Grammar and Reader, and four books of Caesar. It is desirable, also, to possess an elementary acquaintance with some modern language. As a test of proficiency in practical grammar and composition, each applicant will be required to write a short English exercise, which he must be able to analyze and parse.

By the term Rhetoric is meant the study of Rhetoric and Practical Composition, as commonly treated in such elementary textbooks as Hart's "Manual of Composition and Rhetoric;" covering such subjects as Punctuation, Diction, the Properties of Style, Figures of Speech, Versification, and especially the practice of Prose Composition.

FOR ADVANCED STANDING.

Candidates for advanced standing, whether from other colleges or not, in addition to the preparatory studies, are examined in those already pursued by the classes which they propose to enter.

Applicants should be at least sixteen years of age, and bring satisfactory testimonials. Young ladies, as well as young men, are received as students.

Tuition is free to residents of California. Students from other States will be charged a matriculation fee of twenty-five dollars, and a tuition fee of fifty dollars per year, payable in advance, twenty-five dollars at the beginning of each half-year.

EXAMINATIONS.

In all the courses of the University, the instruction, whether by lectures or text-books, is accompanied by daily examinations.

Term examinations are held at the close of the first term, on the studies of the term. These examinations are either in writing or oral, according to the nature of the study.

Annual examinations are held at the close of each academic year. They cover the ground gone over during the year, and the four thus held constitute the examination for a degree. These examinations are chiefly in writing.

EXAMINATIONS FOR DEGREES.

For students passing through the University, these examinations are annual, as stated above, and there is no other examination covering the whole course. But the law provides such a general examination for those who have studied elsewhere:

"Students who shall have passed not less than a full year as resident students in any college, academy, or school in this State, and, after examination by the respective Faculty of such college, academy, or school, are recommended by such Faculty as proficient candidates for any degree in any regular course of the University, shall be entitled to be examined therefor at the annual examination; and on passing such examination shall receive such degree for that course, and the diploma of the University therefor, and shall rank and be considered in all respects as graduates of the University.

"All students of the University who have been resident students thereof for not less than one year, and all graduates of the University in any course, may present themselves for examination in any other course or courses, at the annual examinations, and, on passing such examination, shall receive the degree and diploma of that course."

GRADUATION THESES.

As a part of the final examination for degrees, every candidate is required to prepare a thesis upon a subject to which he has given special attention.

Members of the Senior Class will be required to announce their subjects to the Faculty (with a brief analysis of the proposed method of discussion), at the close of the winter vacation. The theses, written out in their complete form, must be handed in to the Faculty on the fifteenth of April. These papers will be examined and marked, and the mark assigned to them will have an important weight in determining the standing of the candidate for his entire course. The improper use of the materials or thoughts of others will cause the thesis to be entirely thrown out. Portions of the theses adjudged the best will be publicly read, in the presence of the Faculty and class, upon appointed days. The estimate of the Faculty will not depend upon the number of pages submitted, but on the amount of care and thought evinced by the work. The object of this regulation is to encourage special original investigations upon important themes growing out of, or suggested by the several courses of study pursued in the University, and to afford a good opportunity for stating, in a clear and definite style, the result of such researches.

REGENTS.

EX OFFICIO REGENTS:

HIS EXCELLENCY WILLIAM IRWIN	SACRAMENTO.
<i>Governor, ex officio President of the Board.</i>	
HIS HONOR, J. A. JOHNSON	SAN QUENTIN.
<i>Lieutenant-Governor.</i>	
HON G. J. CARPENTER	PLACERVILLE.
<i>Speaker of the Assembly.</i>	
HON. EZRA S. CARR	SACRAMENTO.
<i>State Superintendent of Public Instruction.</i>	
MARION BIGGS, Esq.	BIGGS' STATION.
<i>President of the State Agricultural Society.</i>	
A. S. HALLIDIE, Esq.	SAN FRANCISCO.
<i>President of the Mechanics' Institute of San Francisco.</i>	
JOHN LeCONTE	BERKELEY.
<i>President of the University.</i>	

APPOINTED REGENTS:

REV. H. STEBBINS, D. D.	SAN FRANCISCO.
HON. LAWRENCE ARCHER	SAN JOSÉ.
J. WEST MARTIN, Esq.	OAKLAND.
HON. SAMUEL B. McKEE	OAKLAND.
HON. JOHN F. SWIFT	SAN FRANCISCO.
JOSEPH W. WINANS, Esq.	SAN FRANCISCO.
J. MORA MOSS, Esq.	OAKLAND.
J. M. HAMILTON, Esq.	GUENOC.
D. O. MILLS, Esq.	MILBRAE.
WILLIAM MEEK, Esq.	SAN LEANDRO.
HON. FRANK M. PIXLEY	SAN FRANCISCO.
HON. WILLIAM T. WALLACE	SAN FRANCISCO.
HON. EUGENE CASSERLY	SAN FRANCISCO.
PROF. GEORGE DAVIDSON	SAN FRANCISCO.

HONORARY REGENTS:*

HON. JOHN S. HAGER	SAN FRANCISCO.
A. J. BOWIE, Esq.	SAN FRANCISCO.

*The term "Honorary," applied to these Regents, indicates only the mode of their election, which was made by the Ex Officio and Appointed Regents. Every Regent is a full member of the Board.

EXECUTIVE OFFICERS.

President of the University,
PROFESSOR JOHN LECONTE.

Advisory Committee,
REGENTS STEBBINS, MOSS, MARTIN, WINANS, AND —.

Treasurer,
D. O. MILLS.

Secretary and Superintendent of the Grounds,
ROBERT E. C. STEARNS.

Dean of the Academic Senate,
MARTIN KELLOGG.

Chief of Military Instruction,
LIEUT. GEORGE G. GREENOUGH, U. S. A.

Land Agent and Assistant Secretary,
J. HAM. HARRIS.

Assistant Land Agent,
W. P. SAXE.

ACADEMIC SENATE.

JOHN LECONTE, M. D.,
President, and Professor of Physics.

WILLIAM ASHBURNER,
Honorary Professor of Mining.

GEO. WOODBURY BUNNELL, A. M.,
Professor of the Greek Language and Literature.

GEORGE DAVIDSON, A. M.,
Honorary Professor of Geodesy and Astronomy.

STEPHEN J. FIELD, LL. D.,
Honorary Professor of Law.

G. G. GREENOUGH,
 (First Lieutenant Fourth United States Infantry),
Professor of Military Science and Tactics.

FREDERICK G. HESSE,
Professor of Industrial Mechanics.

EUGENE W. HILGARD, PH. D.,
Professor of Agriculture, Agricultural Chemistry, General and Economic Botany.

MARTIN KELLOGG, A. M.,
Dean, and Professor of the Latin Language and Literature.

JOSEPH LeCONTE, M. D.,
Professor of Geology and Natural History.

BERNARD MOSES, PH. D.,
Professor of History and Political Economy.

PAUL PIODA,
Professor of Modern Languages.

WILLARD B. RISING, PH. D.,
Professor of Chemistry.

EDWARD R. SILL, A. M.,
Professor of the English Language and Literature.

FRANK SOULÉ, JR.,
 (United States Military Academy),
Professor of Civil Engineering and Astronomy.

WILLIAM T. WELCKER,
 (United States Military Academy),
Professor of Mathematics.

GEORGE F. BECKER, A. B., PH. D.,
Instructor in Mining and Metallurgy.

JOHN W. BICE, PH. B.,
Instructor in Engineering.

SAMUEL B. CHRISTY, PH. B.,
Instructor in Chemistry.

JOHN B. CLARK, PH. B.,
Instructor in Mathematics.

DAVID CUMMING, PH. B.,
Instructor in Mathematics.

GEORGE C. EDWARDS, PH. B.,
Instructor in Mathematics.

CARLOS F. GOMPERTZ,
Instructor in Spanish.

LEANDER L. HAWKINS, PH. B.,
Instructor in Mathematics and Surveying (Field Practice).

JOHN D. HOFFMANN,
Instructor in Mechanical and other branches of Instrumental Drawing.

A. WENDELL JACKSON, JR., PH. B.,
Instructor in Mineralogy.

HENRY B. JONES,
Assistant Instructor in French and German.

WM. CAREY JONES, A. B.,
Recorder of the Faculty, and Instructor in Latin.

EDWARD A. PARKER, PH. B.,
Instructor in Physics and Mechanics.

JAMES M. PHILLIPS, A. B.,
Instructor in Hebrew, Chaldaic, and Syriac.

ALBIN PUTZKER,
Instructor in German.

JOSEPH C. ROWELL, A. B.,
Librarian.

E. H. SEARS, A. B.,
Instructor in Latin and Greek.

JOHN M. STILLMAN, PH. B.,
Instructor in Chemistry.

FRANK S. SUTTON, PH. B.,
Assistant in Agricultural Chemistry.

BENJ. P. WALL, PH. B.,
Instructor in English.

GRADUATE ASSISTANTS.

EDWARD BOOTH, PH. B.,
Chemistry.

F. J. SOLINSKY, PH. B.,
Mathematics.

STUDENT ASSISTANT.

AUGUST HARDING,
Chemistry.

ROBERT E. C. STEARNS,
Secretary, and Superintendent of the Grounds.

J. HAM HARRIS,
Land Agent, and Assistant Secretary.

W. P. SAXE,
Assistant Land Agent.

JOHN ELLIS,
Gardener.

ABEL WHITTON,
Manager University Press.

CHARLES BUTTERS,
Telegraphic Operator.

J. J. RIVERS.
Conservator.

JANITORS.

GEORGE GLEASON, JOHN HART.

STUDENTS.

RESIDENT GRADUATES PURSUING ADVANCED STUDIES UNDER DIRECTION OF
THE FACULTY.

Name.	Residence.
Edward Booth, Ph. B.	Oakland.
Myer E. Jaffa, Ph. B.	San Francisco.
William R. Sherwood, Ph. B.	San Francisco.
Frank J. Solinsky, Ph. B.	Chinese Camp.
Total	4.

FIRST, OR SENIOR CLASS.

Name.	Course.	Residence.
Clara Bartling	Classical	Oakland.
Lemuel Warren Cheney	Mining	Chico.
James Bruce Clow	Literary	Oakland.
William Raymond Daingerfield	Classical	San Francisco.
John Haines Durst	Literary	Wheatland.
Frank Gray Easterby	Mechanics	Napa.
Walter Forsythe Finnie	Classical	Grass Valley.
George Everett Fogg	Mining	Oakland.
Joseph Hutchinson	Mining	San Francisco.
Walter Brewster Jones	Chemistry	Benicia.
Frank William Maher	Engineering	San Francisco.
Fiesco Mandlebaum	Classical	San Francisco.
Alex. Francis Hart Morrison	Classical	San Francisco.
Frederick Wellington Morse	Chemistry	Chico.
William Richard Poyzer	Engineering	Grass Valley.
Jacob Henry Sharp	Chemistry	San Francisco.
William Fulton Soule	Classical	San Francisco.
Charles Munson Stetson	Literary	Ceres.
Edgar Curtiss Sutcliffe	Classical	San Francisco.
Charles L. Tilden	Literary	San Francisco.
Thomas Orlando Toland	Classical	Berkeley.
May Benton Treat	Literary	San Francisco.
William Martin Van Dyke	Classical	East Oakland.
Clarence Harrison Warren	Classical	San Mateo.
Arria Marshall Wertz	Literary	Berkeley.
Frank Whitby	Engineering	Suisun City.
Frank Randolph Whitecomb	Classical	San Francisco.
Joseph William Winans	Classical	San Francisco.
Frederick William Zeile	Literary	San Francisco.
Total		29.

SECOND, OR JUNIOR CLASS.

Name.	Course.	Residence.
Frank H. Atwater	Chemistry	Petaluma.
Christopher S. Batterman	Engineering	Oakland.
Henry Bernard	Engineering	San Francisco.
Morris Bien	Engineering	San Francisco.
Daniel L. Bishop	Literary	Lower Lake.
Charlotte Bockius	Literary	Watsonville.
Sarah Bolton	Literary	San Francisco.
Franklin J. Bonney	Classical	Oakland.
Alice M. Boyer	Literary	San Francisco.
Frederick E. Bronson	Classical	Santa Barbara.
John Q. Brown, Jr.	Literary	Sacramento.
Charles Butters	Mechanics	San Francisco.
Alexander J. Campbell	Engineering	Honolulu, H. I.
Nathan C. Carnall	Classical	Berkeley.
William H. Chapman	Classical	Sacramento.
William S. Charleston	Engineering	Mountain View.
Martha R. Chase	Literary	Martinez.
F. B. Clowes	Mining	Stockton.
Marie D. Cole	Literary	St. Helena.
Charles H. Congdon	Mining	San Francisco.
Henry I. Coon	Classical	Menlo Park.
James L. Cotton	Mining	San Francisco.
William S. Cranmer	Literary	Fresno City.
Wallace O. Currier	Classical	San Francisco.
Carroll M. Davis	Classical	Oakland.
Ella H. De Wolfe	Literary	San Francisco.
Marcellus M. Dorn	Literary	Watsonville.
Bertram H. Dunshee	Mining	Santa Barbara.
Herman Dwinelle	Classical	Berkeley.
George S. Edwards	Mining	Santa Barbara.
Carlton Everett	Engineering	San Francisco.
William H. Hammond	Literary	Oakland.
Henry R. Havens	Literary	Oakland.
Anna Head	Classical	Oakland.
Frederick W. Henshaw	Literary	Oakland.
Gallantime G. Hicks	Engineering	Portland, Or.
Samuel Irving	Classical	Oakland.
Herman F. Jantzen	Classical	San Francisco.
George P. Kelsey	Engineering	Merced Falls.
Edwin G. Knapp	Classical	Columbia.
William H. Leffingwell	Mechanics	San Francisco.
Aurelius F. Martin	Classical	Big Meadows.
John McHenry	Engineering	San Francisco.
Mary McHenry	Classical	San Francisco.
Thomas A. McMahon	Engineering	Martinez.
Lansing Mizner	Literary	Benicia.
J. A. Morrow	Literary	Oakland.
William H. Morrow	Literary	Oakland.
Fremont Morse	Engineering	Bolinas.
Robert W. Musgrave	Chemistry	Grass Valley.
Walter H. Nicholson	Mining	San Francisco.
James O'Callaghan	Mining	San Francisco.
Henry W. O'Melveny	Literary	Los Angeles.
Edmund O'Neill	Agriculture	Oakland.
George C. Pardee	Literary	Oakland.
Robert A. Poppe	Literary	Sonoma.
Edward Reed	Chemistry	Snelling.
Frederick H. Rothchild	Mining	Los Angeles.
Henry W. Sander	Mining	San Francisco.
Henry E. Sanderson	Literary	San Francisco.
Henry M. Savage	Literary	San Francisco.
Albert W. Scholle	Literary	San Francisco.
Charles M. Sheffield	Literary	San Francisco.
Milicent W. Shinn	Classical	Niles.
Charles W. Slack	Mechanics	Cambria.

SECOND, OR JUNIOR CLASS—Continued.

Name.	Course.	Residence.
Leon Sloss	Chemistry	San Francisco.
George A. Stanley	Engineering	San Francisco.
Louis Stern	Literary	San Francisco.
Sigmund Stern	Literary	San Francisco.
Clarence H. Wallace	Engineering	Napa.
Adair Welcker	Literary	Oakland.
John H. Wheeler	Mining	St. Helena.
George B. Willcutt	Chemistry	Oakland.
George L. Wilson	Literary	Alameda.
Samuel I. Wormser	Chemistry	San Francisco.

Total76

THIRD, OR SOPHOMORE CLASS.

Name.	Course.	Residence.
Frank H. Adams	Classical	Oakland.
Ida D. Benfey	Literary	Berkeley.
Marion B. Bennison	Literary	Oakland.
Albert D. Bird	Literary	Placerville.
William A. Blyth	Literary	Montezuma.
Edgar H. Booth	Mechanics	San Francisco.
Edith Briggs	Literary	Alameda.
Emily L. Buckhout	Classical	Oakland.
Henry W. Buckley	Mechanics	Martinez.
James W. Byrne	Literary	San Francisco.
Sallie Carnall	Classical	Berkeley.
Samuel A. Chambers	Classical	Sacramento.
Harry W. Carroll	Engineering	Sacramento.
George E. Colby	Engineering	Oakland.
Edward L. Collins	Literary	Oakland.
John G. Conrad	Engineering	San Francisco.
Abraham A. D'Ancona	Classical	San Francisco.
Belle D. Davis	Classical	San José.
William C. Deal	Classical	San Francisco.
Wallace Dinsmore	Literary	Rohnerville.
Milton S. Eisner	Classical	San Francisco.
O. M. Enslow	Engineering	Oroville.
Dwight W. Fox	Literary	Garden Valley.
Louis N. France	Literary	Gridley.
Hugh W. Fraser	Literary	San Francisco.
Edwin H. Garthwaite	Mining	Oakland.
John P. Gray	Literary	Berkeley.
Charles S. Greene	Classical	Berkeley.
William Greenebaum	Science	San Francisco.
Lewis G. Harrier	Literary	Vallejo.
Mary A. Hawley	Literary	Oakland.
John H. Henderson	Classical	Oakland.
Jacob Hoeck	Literary	San Francisco.
William E. Hopkins, Jr.	Literary	Oakland.
George Hughes	Literary	Nevada City.
Frank M. Kelsey	Literary	Stockton.
Eugene LaRue	Literary	Sacramento.
Henry Leck	Agriculture	Los Angeles.
Milburn H. Logan	Mining	St. Helena.
Louis H. Long, Jr.	Mining	Vallejo.
Arthur J. Lowe	Literary	Blue Cañon.
Reuben W. Mastick	Mechanics	Alameda.
Charles C. McCarty	Classical	Berkeley.
James M. McDonald, Jr.	Literary	San Francisco.

THIRD, OR SOPHOMORE CLASS—Continued.

Name.	Course.	Residence.
Lulu E. Medbery	Classical	Berkeley.
George A. Metcalf	Engineering	Santa Barbara.
Mark C. Meyer	Literary	San Francisco.
Thomas E. Nichols	Literary	Los Angeles.
Anthony Olsen	Literary	Sacramento.
William E. Osborn	Literary	Sacramento.
H. C. Perry	Engineering	Gibsonville.
Mark Platshek	Classical	San Francisco.
George W. Ray	Engineering	North San Juan.
William Roalfe	Engineering	Alameda.
Michael Seeligsohn	Classical	San Francisco.
John A. Sheehan	Literary	Marysville.
E. H. Shepard	Mining	San Francisco.
Hugh A. Stewart	Literary	Columbia.
A. D. Tenny	Classical	Oakland.
Rhoda L. Tucker	Literary	Oakland.
Adolph H. Weber	Agriculture	San Francisco.
Arthur L. Whitney	Literary	Petaluma.
Katie F. Woolsey	Literary	Berkeley.
Total		63

FOURTH, OR FRESHMAN CLASS.

Name.	Course.	Residence.
Frank L. Adams	Classical	Oakland.
William L. Adams	Classical	Menlo Park.
Lawrence M. Agard	Scientific	Oakland.
James Akerly	Scientific	Oakland.
Charles O. Alexander	Scientific	San Francisco.
Richard P. Ashe	Literary	San Francisco.
Ella F. Bailey	Scientific	San Francisco.
Lizzie Barrett	Literary	Merced Falls.
Jennie Barry	Literary	Watsonville.
Fannie Bernstein	Scientific	Los Angeles.
Felix Bettelheim	Classical	San Francisco.
Augustus R. Bidwell	Literary	Oakland.
William J. Bowman	Scientific	Oakland.
Antoine Bournonville	Scientific	San Francisco.
Adah Bragg	Scientific	San Francisco.
R. Inniss Bromley	Scientific	Oakland.
Glenn Owen Carnall	Literary	Berkeley.
Russell W. Clarke	Literary	Berkeley.
Thomas E. Connolly	Scientific	Vallejo.
Charles M. Coon	Scientific	Mayfield.
E. Herndon Crane	Scientific	San Lorenzo.
George Cummings, Jr.	Scientific	San Francisco.
Henry P. Dalton	Scientific	Pacheco.
Thomas F. Dempsey	Scientific	Vallejo.
Edwin DeF. Drake	Scientific	Strawberry Valley.
William A. Duncombe	Scientific	Berkeley.
James P. Dunn	Literary	Berkeley.
George Edwards	Scientific	Sacramento.
Frank J. Fairbanks	Literary	Petaluma.
Leonard C. Fisher	Scientific	Oakland.
Edward C. Fleming	Scientific	San Leandro.
Edward G. Frisbie	Literary	Vallejo.
William W. Gill	Scientific	Oakland.
Annie L. Gilmore	Literary	Placerville.
Frank J. Goodwin	Scientific	Oakland.

FOURTH, OR FRESHMAN CLASS—Continued.

Name.	Course.	Residence.
H. C. Goodyear	Scientific	Benicia.
Charles H. Grimm	Literary	San Francisco.
Edward H. Hamilton	Scientific	Oakland.
Richard P. Hammond	Literary	San Francisco.
George S. Harkness, Jr.	Classical	Stockton.
Harry H. Haskell	Literary	San Francisco.
Charles N. Haskins	Classical	Oakland.
John W. Havens	Scientific	Berkeley.
Katharine Head	Literary	Oakland.
Harry Hinkle	Scientific	San Francisco.
Charles E. Hollister	Scientific	Courtland.
Rothwell Hyde	Scientific	San Francisco.
Eugene T. Jones	Scientific	San Francisco.
Louis L. Jones	Literary	San Francisco.
Horace G. Kelsey	Scientific	Merced Falls.
Hermann Kower	Scientific	Fruit Vale.
Douglas Lindley	Scientific	Sacramento.
Max Loewenthal	Classical	Sacramento.
Henry S. Manheim	Scientific	San Francisco.
Seth Mann	Classical	San Francisco.
Walter D. Mansfield	Classical	Napa City.
Robert McClure	Scientific	Point Arena.
James J. McGilivray	Classical	Oakland.
Samuel B. McKee	Literary	Oakland.
Maurice McMicken	Literary	Olympia, W. T.
J. Hermann Meese, Jr.	Scientific	San Francisco.
Hiram F. Merrill	Scientific	Denver.
Samuel C. Meyer	Literary	San Francisco.
Fred. C. Miles	Literary	Oakland.
William H. Miles	Scientific	Bangor.
Robert Moore	Scientific	San Francisco.
Leo Joseph Newmark	Classical	San Francisco.
Albert Painter	Literary	San Francisco.
Herman Partsch	Scientific	Cholame Valley.
Hiram A. Pearsons	Scientific	San Francisco.
Alice E. Pratt	Literary	St. Helena.
Osgood Putnam	Classical	San Francisco.
Henry A. Raft	Classical	San Francisco.
Charles Reed	Literary	Oakland.
Edward L. Rhodes	Literary	San José.
Norman A. Rideout	Literary	Marysville.
Hubert S. Rosenthal	Scientific	San Francisco.
Harry Russell	Scientific	Sacramento.
Kate O. Sessions	Scientific	East Oakland.
Hattie L. Shaw	Literary	Castroville.
Joseph A. Shaw	Scientific	Ferndale.
Harry H. Sherwood	Scientific	San Francisco.
Guy Shirley	Scientific	Martinez.
Louis Sloss, Jr.	Classical	San Francisco.
James A. Smith	Scientific	San Francisco.
Adrian H. Snider	Classical	Sacramento.
George C. Snook	Literary	San Francisco.
Elwin L. Stone	Scientific	Alamo.
Fred. S. Stratton	Classical	East Oakland.
Daniel Suter	Scientific	San Francisco.
Francis W. Sweeney	Literary	San Francisco.
George R. Walden	Literary	Napa City.
John W. Wentworth	Scientific	Vallejo.
Francis F. Weston	Scientific	Oakland.
Crayton W. Wilkinson	Scientific	Berkeley.
Charles N. Williams	Scientific	Los Angeles.
Thomas H. Williams	Classical	Oakland.
George W. Williamson	Scientific	Los Angeles.
Harry P. Winegar	Classical	San Francisco.

Total 99

STUDENTS AT LARGE.

Name.	Course.	Residence.
George A. Atherton	Engineering	Novato.
Harry W. Bodwell	Engineering	San Francisco.
Effie D. Briggs	Literary	
W. C. Burke	Literary	San Francisco.
Charles Dana Burrage	Classical	Napa.
Samuel A. Chapin, Jr.	Classical	San Francisco.
Ernest V. Cowell	Scientific	Santa Cruz.
Russell Lambert Dunn	Mining	San Francisco.
Varney W. Gaskill	Chemistry	Oakland.
Joseph D. Grant	Literary	San Francisco.
Eugene W. Howell	Scientific	Oakland.
Joseph Mailliard	Scientific	San Rafael.
Will N. Martin	Scientific	San Francisco.
Malcolm Moody	Literary	Dalles, Oregon.
John D. McGillivray	Classical	Oakland.
Godwin McNeill	Literary	Sacramento.
Ernest G. du Py	Engineering	Los Angeles.
Joseph L. Scotchler	Literary	Oakland.
Edwin M. Taylor	Literary	San Francisco.
Fred P. Tuttle	Classical	Oakland.
William T. Wallace	Literary	San Francisco.
Sherrod Williams	Classical	Oakland.
Total		22

SPECIAL STUDENTS.

Name.	Course.	Residence.
Seddie E. Anderson	Literary	Santa Cruz.
Lizzie J. Baker	Literary	Oakland.
Elizabeth N. Bradley	Literary	Dobb's Ferry, New York.
Syria E. Brown	Literary	Pagoda Hill.
Lella L. Cotton	Literary	San Francisco.
Mary A. Dornin	Literary	Berkeley.
Fannie Dougherty	Literary	Berkeley.
Martha A. Dougherty	Literary	Berkeley.
C. Reinhold Gutheil	Drawing	San Francisco.
August Harding	Chemistry	Oakland.
Louis J. Harrison	Chemistry	San Francisco.
Adèle Huribut	Chemistry	San Francisco.
Lucy S. Jones	Literary	Mariposa.
Laura D. Kelsey	Literary	Berkeley.
Waldemar G. Klee	Botany	Berkeley.
Rosa M. Livingstone	Literary	Berkeley.
Ermentine A. Poole	Literary	Oakland.
Louis Roethe	Drawing	San Francisco.
Musidore Rowntree	Literary	Berkeley.
Nellie P. Sell	Literary	Berkeley.
Simeon J. Serebrenikoff	Chemistry	San Francisco.
George N. Walton	Scientific	Oakland.
John M. Wilson	Metallurgy	San Francisco.
Mollie Woolsey	Literary	Berkeley.
Florence E. Wyman	Literary	Oakland.

Total

25

NUMBER OF STUDENTS.

SUMMARY.

(Not including the Students in Medicine).

Whole number	318
Young men	269
Young ladies	49

I.—ARRANGED BY COURSES.

Post Graduates	4
Candidates for the Bachelor's Degree	267
Students at Large	22
Special Course Students	25
Total	318

II.—ARRANGED BY COLLEGES.

Students in the five Colleges of Science	114
Students in the College of Letters:	
Classical	59
Literary	94
.....	153
Students at Large and Special	47
Students post graduate	4
Total	318

The Students in the Scientific Colleges are not required to announce the special College (*i. e.*, Agriculture, Mechanics, Mining, Chemistry, or Engineering,) they choose to enter, until the beginning of the second year.

III.—ARRANGED BY CLASSES.

	Science.	Letters.	Total.
Senior, or First Class	10	19	29
Junior, or Second Class	32	44	76
Sophomore, or Third Class	18	45	63
Freshman, or Fourth Class	54	45	99
Totals	114	153	267
Not assigned to classes			51
Total			318

NOTE.—Many of the Students at Large, and some of the Special Course Students, are pursuing nearly full courses in connection with some one of the Colleges. Many of these expect to become candidates for a Degree.

There is no Preparatory Class.

INCREASE IN NUMBER OF STUDENTS.

The number of students has steadily increased since the University was opened, as follows:

YEARS.	Science	Letters	Special and at Large,*	Total	Ladies
1869-70	14	21	5	40	
1870-71	28	24	26	78	8
1871-72	75	28	50	153	27
1872-73	93	44	48	185	39
1873-74	100	44	47	191	22
1874-75	95	73	63	231	38
1875-76	134	138	38	310	42
1876-77	126	140	39	305	45
1877-78	114	153	51	318	49

* Including, in 1873-4, two; in 1874-5, nine; in 1875-6, five; in 1876-7, three, and in 1877-8, four, post-graduates.

HONORS.

GRADUATES JUNE SEVENTH, EIGHTEEN HUNDRED AND SEVENTY-SIX,
WITH THE SUBJECTS OF THEIR THESES.

BACHELORS OF PHILOSOPHY (SCIENCE).

Fred Lawrence Button (Engineering)	Oakland.
" <i>Webster Street Draw-bridge, Oakland; a Graphical Analysis, with Diagrams.</i> "	
Warren Sherman Palmer (Engineering)	San Francisco.
" <i>A Discussion of the best means of Improving Point Boneta as a Lighthouse and Fog-signal Station.</i> "	
Arthur Walter Scott (Chemistry)	San Francisco.
" <i>Analysis of Tetrahedrite.</i> "	
Roberdeau Harmon (Chemistry)	Oakland.
" <i>Analysis of Pyrophyllite and Pyroxene.</i> "	
Vincent Hook (Engineering)	Pacheco.
" <i>Schemes, Plans, and Specifications for a Canal at Pacheco Creek.</i> "	
Elizabeth Bragg (Engineering)	San Francisco.
" <i>Solution of a Peculiar Problem in Surveying.</i> "	
William Henry Chamberlain (Chemistry)	Oakland.
" <i>An Analysis of Alum-rock.</i> "	
Edmund Charles Conroy (Chemistry)	San Francisco.
" <i>An Analysis for a Saline Concretion; and an Analysis of Turquoise.</i> "	

Thomas Joseph Fitzpatrick (Engineering).....	San Francisco.
<i>"Comparison of Railways with Canals, as a means of Transportation."</i>	
William Frank Hardy (Engineering).....	Oakland.
<i>"The American System of Protection."</i>	
Horace Allen Redfield (Engineering).....	Oakland.
<i>"Narrow-gauge Railways."</i>	
Charles Edward Washburn (Engineering).....	San José.
<i>"Improvement of the Delta of the Mississippi River."</i>	
Delos Sumner Watkins (Engineering).....	Santa Clara.
<i>"Improvement of Oakland Harbor."</i>	
James Hepburn Wilkins (Engineering).....	San Rafael.
<i>"Earthen Dams."</i>	

BACHELORS OF PHILOSOPHY (LETTERS).

Myer Jacobs.....	San Francisco.
<i>"The Sources of Shakspeare."</i>	
Benjamin Pitman Wall.....	Oakland.
<i>"The Relation of Religion to Architecture."</i>	
Nathan Albert Morford.....	Greenville, Pa.
<i>"The Vicissitudes of Political Liberty, as an Element of the English Constitution: from the Earliest Period of Germanic Polity to the Close of the Thirteenth Century."</i>	
Peter Francisco Charles Sander.....	San Francisco.
<i>"Goethe's 'Hermann and Dorothea.'"</i>	
Sarah Isabel Shuey.....	Fruit Vale.
<i>"Ought Women to be Physicians?"</i>	

BACHELORS OF ARTS.

Jacob Richard Freud.....	San Francisco.
<i>"Resumption of Specie Payments."</i>	
Hattie Josephine Hodgdon.....	San Francisco.
<i>"The Greek Mind viewed through the Greek Mythology."</i>	
Augustus Neander Buchanan.....	Berkeley.
<i>"American Poets."</i>	
Henry May Pond.....	San Francisco.
<i>"The Particle 'Ar.'"</i>	
Fred Searls.....	Nevada City.
<i>"Roman Law."</i>	
Ryland Burnett Wallace.....	San Francisco.
<i>"The Golden Age of American Oratory."</i>	
John Nicholson Emmet Wilson.....	San Francisco.
<i>"Civilization in the Roman Empire, during the first two Centuries of our Era, and in the United States to-day."</i>	
George Thomas Wright.....	San Francisco.
<i>"The History of Eloquence."</i>	
Winsor Linn Brown.....	Oakland.

MASTERS OF ARTS (IN COURSE).

J. B. Reinstein, Frank Otis, and Ebenezer Scott, of the Class of 1873.

GRADUATES JUNE SIXTH, EIGHTEEN HUNDRED AND SEVENTY-SEVEN,
WITH THE SUBJECTS OF THEIR THESES.

BACHELORS OF PHILOSOPHY (SCIENCE).

Edward Booth (Chemistry).....	Oakland.
<i>"A Mineralogico-Chemical Analysis of Partzite."</i>	
George Ellis De Golia (Engineering).....	Oakland.
<i>"The Future Railroad Sleeper."</i>	
Frank Hardenbergh Denman (Mining).....	Petaluma.
<i>"Apparatus used in Conducting Water from its Sources to an Hydraulic Mine."</i>	
Harmon Denslow (Engineering).....	East Oakland.
<i>"Bessel's Solution of the Three Point Problem Demonstrated."</i>	
Dolphes Brice Fairbanks (Mining).....	Petaluma.
<i>"Diamond Drill."</i>	
Myer Edward Jaffa (Mining).....	San Francisco.
<i>"Analyses of Auriferous Pyrites from the Grass Valley Region."</i>	
Horry Meek (Mining).....	San Lorenzo.
<i>"Sluices."</i>	
William Channing Morison (Engineering).....	Fruit Vale.
<i>"Railroad Fastenings."</i>	
George Reed, Jr. (Agriculture).....	Snellings.
<i>"American Agriculture."</i>	
Edward Austin Rix (Mechanics).....	San Francisco.
<i>"An Hydraulic Motor."</i>	
William Richard Shaw (Chemistry).....	Oakland.
<i>"An Analysis of Chalcopyrite."</i>	
William Robert Sherwood (Mining).....	San Francisco.
<i>"The Hydraulic Monitor."</i>	
Frank Joseph Solinsky (Mining).....	Chinese Camp.
<i>"Peat of the Tule Lands Considered as a Fuel."</i>	
Howard Stillman (Mechanics).....	San Francisco.
<i>"A Problem in Hydraulics."</i>	

BACHELORS OF PHILOSOPHY (LETTERS).

Lewis Washington Brown.....	Cacheville.
<i>"The Development of Religion; particularly of Anthropomorphism."</i>	
Nathan Hirsch Frank.....	Suisun City.
<i>"Guilds and Trades-Unions."</i>	
David Breckenridge Marx.....	San Francisco.

George Deuchar Murray	Eureka.
<i>"Malthus' Doctrine of Population."</i>	
Joseph Warren Welch	San Francisco.
<i>"Origin and Development of the English Drama."</i>	
Alice Harriet Whitcomb	San Francisco.
<i>"Study of the Influences at Work on Men, especially Literary Men."</i>	

BACHELORS OF ARTS.

Edward Wooster Cowles	San Francisco.
<i>"The Effect of Climate and of Recent Immigration on the American People."</i>	
Theodore Gray	Benicia.
<i>"The Athenian Democracy: its position in Political Science."</i>	
Peter Thomas Riley	Grass Valley.
<i>"The Historic Power of the Latin Tongue."</i>	
John Wooster Robertson	San Francisco.
<i>"The Gracchi and their Times."</i>	
Reginald Heber Webster	Stockton.
<i>"The Progress of Political Economy."</i>	
John Bernard Clarke (Mining), of the Class of 1876	San Francisco.
<i>"Considerations on the Metallurgy of Quicksilver at New Almaden."</i>	

Mr. Clarke was a candidate for the highest honors in the class of 1876, but owing to a severe illness was unable to graduate with his original class.

MASTERS OF ARTS (IN COURSE).

Nathan Newmark and Clarence J. Wetmore, of the Class of 1873.

COMMENCEMENT SPEAKERS.

CLASS OF EIGHTEEN HUNDRED AND SEVENTY-SIX.

Hattie Josephine Hodgdon	San Francisco.
<i>Salutatory Oration, in Latin.</i>	
Jacob Richard Freud	San Francisco.
<i>"Heterogeneity of the American People."</i>	
Benjamin Pitman Wall	Oakland.
<i>"The duty of the Scholar."</i>	
Fred Lawrence Button	Oakland.
<i>Valedictory Oration.</i>	

CLASS OF EIGHTEEN HUNDRED AND SEVENTY-SEVEN.

Theodore Gray	Benicia.
<i>Salutatory Oration, in Latin.</i>	
Dolphes Brice Fairbanks	Petaluma.
<i>Oration, "The Age of Gold."</i>	

PRIZES.

* THE UNIVERSITY MEDAL.

Class of 1871	F. H. Whitworth.
Class of 1872	J. M. Whitworth.
Class of 1873	Frank Otis.
Class of 1874	Thomas F. Barry.
Class of 1875	Dwight B. Huntley.
Class of 1876	Fred L. Button.
Class of 1877	Theodore Gray.

FOR EXCELLENCE OF THESES, EIGHTEEN HUNDRED AND SEVENTY-SIX.

[A gift of \$100 from the Alumni of the University, in two equal parts: one for the best thesis in the Colleges of Science, the other for the best thesis in the College of Letters.]

- (1) Colleges of Science: Fred L. Button.
- (2) College of Letters: Divided between Hattie J. Hodgdon and J. R. Frend.

FOR EXCELLENCE OF THESES, EIGHTEEN HUNDRED AND SEVENTY-SEVEN.

- (1) Colleges of Science: E. A. Rix.
- (2) College of Letters: Divided between Theodore Gray and R. H. Webster.

PRIZES IN POLITICAL ECONOMY, EIGHTEEN HUNDRED AND SEVENTY-SEVEN.

[The prizes offered by a friend of the University for the encouragement of studies in Political Economy are awarded as follows]:

- Fifty dollars for the best essay, to Reginald H. Webster.
 Twenty-five dollars for the next best essay, to Nathan H. Frank.
 Twenty-five dollars for the best examination in Political Economy, to Nathan H. Frank.

*The University Gold Medal (value one hundred and twenty-five dollars) to be awarded, according to the direction of the donors, "to the most distinguished graduate of the year."

This medal is procured from the income of a special fund, originally of two thousand dollars, which was contributed by the following gentlemen: Henry Durant, S. F. Butterworth, Andrew J. Moulder, William C. Ralston, William Watt, J. Mora Moss, Edward Tompkins, John W. Dwinelle, F. L. A. Pioche, A. A. Cohen, D. O. Mills, Barron & Co., P. H. Canavan, Haggin & Tevis, Richard P. Hammond, A. S. Hallidie, H. M. Newhall, William Morris, A. Hayward, Charles Mayne, William Alvord, Edmond L. Goold, L. L. Robinson, John S. Hager, H. A. Lyons, William Burling, John Benson, Lafayette Maynard, E. L. Sullivan, I. Friedlander, Louis Sachs, William A. Woodward, John B. Felton, Samuel Merritt, S. B. McKee, Thomas Findley, William Sharon, and William M. Lent.

OFFICERS OF THE CORPS OF CADETS.

(Armory in the North Hall, Berkeley.)

PROFESSOR OF MILITARY SCIENCE AND TACTICS,

G. G. GREENOUGH,

First Lieutenant Fourth United States Artillery, commanding Battalion.

COMMISSIONED STAFF.

F. G. EASTERBY..... *First Lieutenant and Adjutant.*
 S. A. CHAPIN, JR..... *First Lieutenant and Quartermaster.*

NON-COMMISSIONED STAFF.

COMPANY A.

L. W. Cheney	Captain.
E. C. Sutcliffe	First Lieutenant.
T. O. Toland	Second Lieutenant.
W. S. Charleston	First Sergeant.
F. Morse	Sergeant.
H. W. Carroll	Sergeant.
C. M. Davis	Sergeant.
H. W. Fraser	Corporal.
G. W. Ray	Corporal.

COMPANY B.

	Captain.
C. M. Stetson	First Lieutenant.
W. B. Jones	Second Lieutenant.
G. G. Hicks	First Sergeant.
W. H. Leffingwell	Sergeant.
M. M. Dorn	Sergeant.
T. A. McMahon	Sergeant.
E. H. Booth	Corporal.
J. W. Byrne	Corporal.

COMPANY C.

W. M. Van Dyke	Captain.
G. E. Fogg	First Lieutenant.
W. F. Finnie	Second Lieutenant.
W. H. Morrow	First Sergeant.
M. Bien	Sergeant.
H. I. Coon	Sergeant.
J. L. Cotton	Sergeant.
E. N. Garthwaite	Corporal.
C. C. McCarty	Corporal.
F. H. Adams	Corporal.

COMPANY D.

F. W. Zeile	Captain.
C. H. Warren	First Lieutenant.
W. H. Nicholson	Second Lieutenant.
	First Sergeant.
	Sergeant.
G. S. Edwards	Sergeant.
W. H. Chapman	Sergeant.
H. C. Perry	Corporal.
E. H. Shepard	Corporal.

COMPANY E.

A. F. Morrison	Captain.
W. R. Poyzer	First Lieutenant.
W. F. Soule	Second Lieutenant.
C. W. Slack	First Sergeant.
A. F. Martin	Sergeant.
C. N. Wallace	Sergeant.
W. S. Cranmer	Sergeant.
M. Moody	Corporal.
E. M. Taylor	Corporal.

COMPANY F.

F. Mandlebanm	Captain.
J. B. Clow	First Lieutenant.
F. W. Maher	Second Lieutenant.
N. C. Carnall	First Sergeant.
G. B. Willcutt	Sergeant.
J. H. Wheeler	Sergeant.
E. G. Knapp	Sergeant.
A. L. Whitney	Corporal.
L. H. Long, Jr.	Corporal.
A. H. Weber	Corporal.

OUTLINE OF THE INSTRUCTIONS

GIVEN IN THE

DIFFERENT BRANCHES OF STUDY.

MATHEMATICS.

FRESHMAN CLASS.

Algebra.—Solution of Equations, first and second degrees; Binomial Theorem; Extraction of Roots of any degree, both of numbers and algebraic quantities; Operations on Radicals of any degree, and upon quantities affected with fractional and negative exponents; Progressions and Proportions; Principle of Indeterminate Co-efficients; Summation of Series by the method of Differences, and by special methods; Solution of Exponential Equations; Theory of Logarithms; General Theory of Equations; different methods of Solving Numerical Equations of any degree. TEXT-BOOK: Davies' New Bourbon.

Geometry.—Instructions in Plane Geometry; Geometry of Three Dimensions, and Spherical Geometry; Exercises in Geometrical Invention; Loci; Symmetry; Maxima and Minima by Geometrical Methods; Harmonic Proportion and Harmonic Pencils; Polars, Centers of Similitude, etc. TEXT-BOOK: Olney's Geometry.

SOPHOMORE CLASS.

Trigonometry and Mensuration.—Thorough practical instruction in the use of Tables of Logarithms, and Logarithmic Functions; Plane and Analytical Trigonometry; Spherical Trigonometry and Mensuration. TEXT-BOOK: Olney's Trigonometry.

Analytical Geometry.—Determinate and Indeterminate Geometry, including a full Examination of the Properties of the Conic Sections. TEXT-BOOK: Church's Analytical Geometry.

Descriptive Geometry.—Spherical Projections; Shades, Shadows, and Linear Perspective. TEXT-BOOK: Church's Descriptive Geometry.

In the Colleges of Letters, Agriculture, Mechanics, and Chemistry, a part of the Second Term is devoted to the study of Surveying. TEXT-BOOK: Murray's Manual of Surveying.

JUNIOR CLASS.

PHYSICS AND MECHANICS.

The course of instruction in Physics and Mechanics commences with the Second, or Sophomore year of the regular course, and is completed in three years.

The students in the Sophomore Class are occupied with the subject of HEAT: including Thermometry; Laws of Expansion of Solids, Liquids, and Gases; Laws of Conduction and Convection; Laws of Liquefaction and Solidification; Laws of Ebullition; Laws of Elastic Force of Vapors; Theory of Steam Engine; Laws of Vaporization and Condensation; Spontaneous Evaporation; Hygrometry; Laws of Specific Heat; Sources of Heat; Mechanical Equivalent of Heat; Heat of Combustion; Dynamical Theory of Heat.

Then commences the course on MECHANICS: embracing General Properties of Matter; Measurement and Representation of Forces; Momentum; Uniform Motion; Uniformly Accelerated and Retarded Motion; Laws of Motion; Composition, Resolution, and Equilibrium of Forces; Composition and Resolution of Motions and Rotations; Principle of Moments; Theory of Parallel Forces; Theory of Couples; Curvilinear Motion, and the Laws of Centrifugal Force.

The students in the Junior Class continue the study of MECHANICS: including Laws of Gravity; Laws of Central Forces; Laws of Falling Bodies; Application of Theory of Parallel Forces to Center of Gravity and Stability; Elementary Machines and Theory of Machinery; Laws of Friction and Resistance to Motion; General Theorem of Work; Maximum Effect of Machines and Animals; Motion on Inclined Planes; Vibratory Motion; Theory of Pendulum and Applications; Laws of Impact; Moment of Inertia; Theory of Projectiles and application to Gunnery. MECHANICS OF LIQUIDS: including Transmission of Pressure; Pressure due to Weight: Buoyancy and Floatation; Application to Specific Gravity. *Motion of Liquids*; Spouting Liquids; Motion of Water in Pipes, Canals, and Rivers; Theory of Water Motors, and the Power of the various kinds of Water-wheels. MECHANICS OF GASES: including Laws of Compressibility and Elasticity; Pressure of the Atmosphere; Barometric Formulæ; Applications to Pumps, Siphons, Fire Engines, etc.; Theory of Resistance of Fluids; Mechanics of Capillarity. ELECTRICITY: including Laws of Electrical Action; Distribution of Electricity; Electrical Induction; Theory of Dielectric Induction; Theory of Leyden Jar and Electric Battery; Electric Light; Mechanical and Chemical Effects of Electricity; Cause of Electrical Phenomena; Atmospheric Electricity; Thunder Storms; Lightning-rods. MAGNETISM: embracing Laws of Magnetic Forces; Terrestrial Magnetism; Declination, Variation, and Dip of the Magnetic Needle; Diamagnetism. ELECTRO-MAGNETISM: including Fundamental Laws of Electro-Dynamics; Power of Electro-Magnets; Electro-Dynamic Induction; Magneto-Electricity; Theory of Induction-Coil; Thermo-Electricity; Law of Ohm; Economy of Electric Motors; and Theory of Electric Telegraph.

Students of the Senior Class are occupied with Undulations and Wave Motion. ACOUSTICS: including Propagation of Sound, and

and Refraction; Dispersion of Light; Spectroscope; Theory of Rainbows and Halos; Interference of Light; Diffraction; Polarization of Light; Theory of Vision; Theory of Optical Instruments.

The method of instruction is by means of lectures and recitations, accompanied by experimental demonstrations and the solution of practical problems.

The cabinet of physical apparatus is very complete, and additions are to be made to it each year.

TEXT-BOOK: Snell's edition of "Olmsted's Natural Philosophy." Recommended for reference: Atkinson's edition of Ganot's Physics; Lardner's "Hand-book of Natural Philosophy;" Silliman's "Principles of Physics;" Peck's Mechanics.

CHEMISTRY.

Instruction is given in general and theoretical Chemistry by lectures, recitations, and laboratory practice. This course extends through three terms, one in Freshman year and two in Sophomore year, and embraces the elements of inorganic and organic chemistry. Students, after making themselves familiar with the details of experiments, are required to repeat the same in the laboratory for elementary chemistry.

An advanced course of lectures will be given to students of the Junior and Senior Classes in general and theoretical chemistry. This course will embrace a discussion of the general principles of the science, and their application to analytical and metallurgical chemistry, and to mineralogy.

The chemical laboratories will be open daily for instruction in analytical chemistry.

The course of instruction in qualitative analysis will include the analysis of simple and complex substances in the wet way, their analysis by the use of the blow-pipe and flame reactions, and the determination of minerals with the blow-pipe. Students will be required to keep a careful record of their work, and to submit the same to the inspection of the Professor. Upon passing satisfactory examination in qualitative analysis, students may pass to the quantitative laboratory.

In the quantitative laboratory, instructions will be given in the quantitative gravimetric analysis of simple and complex salts, minerals, ashes of plants, mineral waters, etc.; in volumetric analysis, including acidimetry, alkalimetry, chlorimetry, etc.; in organic analyses; in gas analysis; in the preparation from inorganic and organic compounds, and in the carrying out of original investigations.

Students taking the course of chemistry will be expected to spend at least fifteen hours a week in the laboratory during Junior year, and twenty hours a week during Senior year.

Students who, for satisfactory reasons, do not wish to take the full course, may enroll themselves with the Professor of Chemistry as special students. Students wishing to take a post-graduate course will find an abundant opportunity for pursuing their studies.

A charge will be made for chemicals, as follows: In elementary chemistry, two and a half dollars per term; in analytical chemistry,

AGRICULTURAL CHEMISTRY.

The study of this subject is carried through the greater part of the Junior year of the course in Agriculture.

The previous year's course of general and economic botany has made the student acquainted with the structure and vital functions of plants, and with the economic uses of the most important members of the vegetable kingdom. He is now introduced to the more detailed study of the substances of which plants and animals are composed, and of the conditions upon which their production depends.

The course follows, in general, the arrangement of subjects in Professor Johnson's two volumes, "How Crops Grow," and "How Crops Feed," which are placed in the student's hands for reference. A large portion of the matter of the first of these books, having already been included in the course of botany, is here only reviewed; while the occurrence, preparation, and chemical nature of the proximate ingredients of plants is experimentally demonstrated in detail, with special reference to technical practice, so far as this has not been done in the general course of chemistry. The origin, formation, and physical functions of soils are next discussed, together with the methods and results of mechanical soil-analysis, demonstrated by means of the "churn elutriator" and microscope. Next follows the chemical composition of soils, and the functions of the several ingredients; soil analysis, its methods; what it can and cannot do for practice when combined with proper examination in the field; soil exhaustion and soil improvement—the prevention of exhaustion, and the remedies when it has occurred—rotation of crops, green manuring, fallowing, subsoiling, thorough-drainage, irrigation; manures, their various kinds, origin, preparation, use, and value. A general summary regarding the principles and practice to be followed in the maintenance of fertility, concludes the Junior course.

PRACTICAL AGRICULTURE.

The studies of the course of Agricultural Chemistry will, to the utmost extent possible, be illustrated by the actual exemplification in the field, of the principles and operations treated of. Instruction in the practical details of husbandry in its different branches will, however, be systematically given through the fourth or Senior year, when a knowledge of the fundamental facts and principles enables the student to appreciate such details in all their bearings.

The course of "*Special Cultures*" includes, besides the details of the culture of the several field crops proper, horticulture, fruit raising, viticulture, stock raising, dairy farming, etc., together with a general account of the manufactures directly connected with agriculture. The details of these, as well as of other manufactures not falling within the limits of metallurgy, come under the head of a chair of technical science, not yet established.

The course of *Special Cultures* will, so far as practicable with the means and appliances at the command of the University, be illus-

for this purpose, year after year, so soon as the necessary funds shall be at command. At the same time class excursions to farms, ranches, and manufactories will, at intervals, be made, in order to show and discuss operations on a commercial basis, and the local modifications rendered necessary by the consideration of financial success.

It is not supposed or expected that, at the conclusion of this short course, embracing such a multitude of subjects, the student will *at once* be fitted to be a successful practical farmer. He should understand that in agriculture, as in all other professions, a "practical course," or apprenticeship in an establishment conducted on an exclusively commercial basis, is a necessary pre-requisite to the successful practical application of the principles of scientific agriculture. But, with a good knowledge of principles, such apprenticeship need be but very brief. The educated agriculturist is enabled to adapt himself to the local requirements of success, upon a short acquaintance with the circumstances, and without the long and costly process of blind experimenting, that so often cripples for years the best efforts of those whose only guide is the practice of their fathers.

It is hoped that hereafter the University may be enabled to employ, for instruction in these special subjects, persons specially conversant with the best practice, both of California and of other countries.

GEOLOGY AND HISTORY.

The course of lectures in this department will commence, in the Junior year, with Zoology. It will include the comparative anatomy and physiology of animals and the principles of classification, and will be illustrated by a full set of diagrams, by the free use of the microscope, and, whenever possible, by dissections.

REFERENCES: Huxley's "Comparative Anatomy of Vertebrates;" Milne Edward's "Manual of Zoology;" Rymer Jones' "Animal Kingdom;" Todd's "Cyclopedia of Anatomy and Physiology," and Nicholson's "Manual of Zoology."

Geology will commence with the Senior year. The first term will be occupied with lectures on Dynamical and Structural Geology. Under Dynamical Geology will be taken up all the agencies now at work modifying the earth's surface and producing structure, viz: Atmospheric Agencies, River Agencies, Glacial Agencies, Ocean Agencies, Igneous Agencies, Organic Agencies, etc. Under Structural Geology will be discussed the General Structure of the Earth; the Structure and Position of Rocks; the Formation and Distribution of Fossils; the Occurrence and Origin of Mineral Veins; the Structure and Mode of Formation of Mountain Chains, etc. The lectures of the second term will be devoted to the History of the Earth and its Inhabitants. This history will be illustrated principally from American Geology, and, as far as possible, from the Geology of the State. Throughout the course special attention will be devoted to points of special interest, scientific or practical. The course is thoroughly illustrated by the use of an ample museum of rocks, ores, and fossils, and an extensive collection of Ward's Geological Casts.

REFERENCES: Dana's "Manual of Geology;" Lyell's "Principles of Geology;" Lyell's "Elements of Geology;" De la Beche's "Geological Observer;" Jukes's "Manual of Geology."

BOTANY.

Instruction in Botany begins with the Sophomore year. The study of Structural and Physiological Botany occupies the first term, the general course pursued being that of Gray's work on Structural Botany, which is used as a work of reference. The lectures, alternating with recitations, are fully illustrated, partly by large scale drawings, partly by figures thrown on a screen by the magic lantern (Marcy's "Sciopticon").

Systematic and Economic Botany occupies the second term. After a discussion of the general principles of classification, the more important orders of the vegetable kingdom are taken up and fully characterized and illustrated. In connection with each, its economically important members are discussed and illustrated by figures and specimens, together with such details in regard to their culture and uses as are of interest to the general student.

The course of General and Economic Botany is optional for the students of the two literary courses, but its first term is obligatory for those of the scientific courses. It serves especially as an introduction to the agricultural course proper, from the most attractive point of view.

MINERALOGY.

The course of lectures upon this subject is delivered to the Junior Class. The first term is mainly occupied with the discussion of the *Physical Properties of Minerals*, including their optical properties, their morphological properties (Crystallography), hardness, specific gravity, etc. Descriptive Mineralogy is also commenced during the latter part of this term, and is finished by the end of the second term. Special attention is paid to the ores—the manner of their geological occurrence, and the most important ore deposits of this country are especially described. A sufficient time at the conclusion of each lecture is devoted by the students to the careful examination of the minerals considered during the lecture. The lectures are fully illustrated by the use of the microscope.

During the Senior year, two hours a week are devoted to work in the mineralogical laboratory, in the practical determination of minerals by means of their physical properties alone. For this purpose, a special students' working collection has been arranged, consisting of the most common and important minerals, particular attention being paid to the ores. These are left unlabeled, and it is the work of the student to determine each species, with the use simply of a knife, a lens, a streak plate, and the general knowledge he has already derived, of their physical appearance. The careful, conscientious determination of the minerals in this collection will enable the student to determine quickly and readily all of the common minerals, with the use of the above-mentioned instruments—such as can be carried in the vest pocket.

During the Senior year, a course of lectures is given upon the practical determination of minerals with the blow-pipe, *i. e.*, by means of their *chemical* properties, entirely independent of their *physical* properties. In addition to the lectures, the student has two hours a week laboratory practice with the blow-pipe.

It is earnestly recommended to those students intending to pursue the study of mineralogy as a specialty, that they make themselves familiar with the German language.

WORKS OF REFERENCE: Dana's "System of Mineralogy," (fifth edition); Nauman's "Mineralogie," (ninth edition); Weisbach's "Synopsis Mineralogica;" Frazer's translation of Weisbach's "Tabellen zur Bestimmung der Mineralien nach äusseren Kennzeichen;" Prime's translation of Von Cotta's "Lehre von den Erzlagertstätten;" Cornwall's translation of Plattner's "Probirkunst mit dem Löthrohre."

MINING.

Special instruction in this department begins in the Junior year. The full course, leading to the degree of Mining Engineer, will occupy the Junior and Senior years and two post-graduate years. As strictly special studies, the course will embrace metallurgy (including assaying), mining, and special mineralogy; but much weight will be given to the scarcely less essential branches, chemistry, geology, surveying, and machinery, including machine construction and drawing.

Careful studies, reduced to writing, of representative mines and reduction establishments, to be made during vacations and a part of the second post-graduate year, are regarded as an essential portion of the course.

The instruction in metallurgy is so arranged as to allow of chemists joining the classes and making themselves familiar with the principles of metallurgy without taking the full course. Special students will be admitted only on exhibiting proof of sufficient preliminary knowledge of chemistry and other subjects.

CIVIL ENGINEERING.

Instruction in this branch is given by recitations, lectures, use of text-books and works of reference, illustrative models, diagrams, maps, etc., and the consideration of existing structures and working plans, with various practical exercises.

Topographical drawing, in ink and in colors, is taught in connection with this branch, as also structural drawing.

The text-books used are Gillespie's Surveying; Gilmore's Roads, Streets and Pavements; Henk's Field Book; Wood's Resistance of Materials, and Bridges and Roofs. A course of lectures is given upon various engineering topics.

For reference, "Simm's Instruments;" Frome's Trigonometrical Surveying; Reports of the United States Coast Survey; Reports of the United States Engineer Corps, their professional papers, etc.; "The Plane Table," as used by the United States Coast Survey; Smith's and Enthoffer's Topographical Drawing; Rankine's Civil Engineering, and Applied Mechanics; Weisbach's Mechanics of Engineering; Moseley's Mechanics of Engineering.

A short course in Surveying, Leveling, etc., is given each year to students not in the College of Engineering.

A post-graduate course of two years' length, embracing the higher subjects of engineering study, leads to the degree of Civil Engineer (C. E.)

INDUSTRIAL DRAWING.

SOPHOMORE CLASS.

First Term.—Construction of geometrical problems relating to points, lines, circles, and polygons, and drawing of combinations of these problems to give practice in the use of instruments.

Second Term.—Drawing of problems in Descriptive Geometry, following the course given in this branch; practice in lettering for maps.

JUNIOR CLASS.

First Term.—Application of Descriptive Geometry to constructions of the Civil and Mechanical Engineer. Platting of field notes in surveying, and leveling and mapping, following the course in Civil Engineering.

Second Term.—Application of Descriptive Geometry continued, with shades and shadows. Platting of road and railroad work, earth work, etc., following the course.

SENIOR CLASS.

First Term.—Construction of simple machines, screws, helical surfaces, teeth of wheels, gearing, etc.; examples of stone cutting and masonry constructions.

Second Term.—Drawing of machine parts from models, etc.; drawing of joints, framing bridges, roofs, etc., following the course.

ASTRONOMY.

Instruction in Astronomy to Engineering students extends through both terms of the Senior year.

It is given by means of recitations, lectures, and the use of text-books, and works of reference, globes, charts, etc.

The text-book employed is Loomis' Treatise on Astronomy. The general course is concluded at the end of the first term. During the second term, instruction in the theory and use of astronomical instruments, in practical astronomy, and in geodesy, is given to the students of civil engineering.

WORKS OF REFERENCE: Woodhouse's, Herschel's, Brunnow's, Guillemin's, Loomis' Practical Astronomies; American and English Ephemeris; Proctor's various Essays; Watson's, Chauvenet's, and Narrien's Astronomies; La Place's "Mécanique Céleste," etc., and Grant's "History of Physical Astronomy."

ENGLISH.

The study of English follows three lines: 1. The study of the Language, in its history and structure. 2. The study of its Literature. 3. The attainment of skill in its practical use.

The course in each may be outlined, as follows:

ENGLISH LANGUAGE.

In Freshman year Hadley's "Brief History of the English Language" is studied. In the College of Letters lectures are given on the Indebtedness of English to Latin and Greek.

In Sophomore year Earle's "Philology of the English Tongue" is studied.

In Junior year the students in the literary course commence the study of Anglo-Saxon and comparative philology, in Corson's "Handbook of Anglo-Saxon and Early English," and March's "Comparative Grammar of Anglo-Saxon," and "Anglo-Saxon Reader."

In Senior year the course in the College of Letters includes the study of Whitney's "Language and the Study of Language." Accompanying this a course of lectures on Language is given to the whole class.

ENGLISH LITERATURE.

In Freshman year lectures are given on Books and Reading, and the Use of the Library.

In Sophomore year Sprague's "Masterpieces in English Literature" is studied.

In Junior year Arnold's "Manual of English Literature" is studied, and in connection with this, in the literary course, Taine's "History of English Literature." Special prose authors are also studied by the class individually, with results given in essays and reviews.

In Senior year, in the first term critical study is given to prose authors; in the second term, to the poets.

Lectures are given on Literature.

ENGLISH COMPOSITION AND RHETORIC.

In Freshman year Hart's Rhetoric and Bain's Rhetoric are studied. Compositions are written on descriptive and narrative subjects. Written translations are required in the classical course.

In Sophomore year Abbott's "How to Write Clearly" is studied. Compositions are written and addresses delivered by the students, in exposition and argument.

In Junior and Senior years practice in composition is continued, in various styles, as well as practice in speaking from notes and without notes. In the literary course special opportunities are given for literary criticism and discussion.

HISTORY AND POLITICAL ECONOMY.

The instruction in History begins with the second term of the Sophomore year and continues, at the rate of four hours a week, till the middle of the Senior year. It is addressed to the students of the College of Letters. The first half of the course deals with the period from the establishment of the Roman Empire to the Peace of Westphalia; the second half, with more recent times, making specially prominent the internal history and governmental forms of the principal nations. Finally, after some knowledge has been acquired of the principles and actual state of modern politics, attention will be directed to ancient history with the view of determining the indebtedness of modern nations to the ancient.

Instruction is given through text-books and lectures.

The course in Political Economy is continued throughout the Senior year. At first the instruction is given through text-books; afterwards by lectures, essays, discussions, and criticism.

LOGIC.

Jevon's Logic will be used as a text-book.

MENTAL PHILOSOPHY.

In Mental Philosophy, Carpenter's "Mental Physiology" is studied in Junior year; in Senior year, Herbert Spencer's "Psychology."

MODERN LANGUAGES.

No knowledge is required in the modern languages for admission to the University. Students, however, will find it greatly to their advantage to possess some proficiency in one or more of them. The importance of early training in the pronunciation of the spoken languages cannot be too strongly urged.

At least one year's instruction in grammar and pronunciation, before entering the University, is desirable, in order to obtain the full benefit of the course of study.

The study of French or German, at the option of students, is required in all the colleges, commencing with the Freshman year. Students in the literary course of the College of Letters will be required to study both German and French, commencing one of them with the Freshman and the other with the Sophomore year.

The course of instruction in each language continues three years.

The study of Spanish and Italian is optional through the course, and any of the modern languages may be pursued as optional to the end of the Senior year.

Grammar, translations, compositions, the modern history and literature of the principal languages and corresponding nations, constitute the course of instruction in this department.

The text-books used vary so as to take advantage of new works bearing upon the subject.

Works for translation are selected with special reference to style, modern history, and literature.

In German, the following text-books will be used, in the order in which they are here given: "A German Course; adapted to the use of Colleges," etc., by G. F. Comfort; "Deutsches Lesebuch" (II. Cursus), by Oltrogge; Whitney's Grammar; "Deutsches Lesebuch" (III. Cursus), by Oltrogge; selections from Goethe, Schiller, Lessing, Uhland, Buerger, Heine, Chamisso, and other prominent German writers.

During the whole course, translations from the English will be required.

Koehler's Dictionary is recommended; any other good work will do.

In French, the text-books for this academic year are as follows: Grammars—Otto, Poitevin, Languellier and Monsanto, and Keetels. For Translation—*Histoire du Peuple Français*, par Paul Lacombe; *La Littérature Française Contemporaine*, par Mennechet; *Littérature Française XVIII^{me} et XIX^{me} siècles*, par J. Demogeot; Corneille—*Le Cid*, Cinna; Molière—*Le Misanthrope*, *Les Femmes Savantes*; Racine—*Athalie*, *Esther*.

In Italian, the text-books are: Grammars—Robello, Boschi, Cuore. For translation—Cantù, Manzoni.

Spanish is an optional study, and the course of instruction is so organized as to allow all who wish to have the benefit of instruction without interference with their obligatory studies.

The text-books used are, for beginners: A Practical Course with the Spanish Language, by Monsanto and Languellier. Second Term—Tolou's Spanish Reader; Compendio de la Gramática Castellana, by P. Hernandez. Third Term—Mantilla's Libro 2º; English and Spanish Dictionary, by Velasquez. Fourth Term—Don Quijote, by J. Ticknor. The Grammar of the Spanish Academy, Spanish Composition, and Literature, and free translations from English into Spanish.

LATIN AND GREEK.

For particulars of the course in this department, see the statement under the College of Letters, classical course.

There is a Sub-Latin Class, for the members of the literary course, who have not passed the entrance examination of the classical course.

HEBREW, CHALDAIC, AND SYRIAC.

The instruction in these languages is optional, and may be pursued by those students who desire it, at any period during their connection with the University. Classes in Hebrew and Syriac have been formed from each of the four Classes of the University.

MILITARY SCIENCE.

The Congressional enactment of eighteen hundred and sixty-two, from which a portion of the University funds was derived, requires instruction in military tactics.

The laws of California also require that the students be organized into a battalion, for military instruction and discipline.

It is expected that every member of the battalion will procure a uniform immediately after his admission.

The course of instruction includes:

I. Tactical instruction in the field and in the class-room, in the Schools of the Soldier, the Company, the Battalion, and Skirmishers.

II. Lectures on the Art of War.

In addition to tactical instruction in the field, instruction is given to the students on the following topics, viz:

1. *Composition and Organization of Armies*—Showing the organization and proportions of different kinds of troops in the armies of the United States, and of the leading powers of Europe at the present day; with a historical sketch of the Greek phalanx, Roman legion, and the style of organization in vogue during feudal times.

2. *The Supply of Armies*—Showing the mode of arming, equipping, clothing, and feeding armies, by the leading nations.

3. *Moving of Armies*—Including transportations, by land or water; marches in our own or a friendly country, and marches in the vicinity of the enemy.

4. *Passage of Rivers*—On ice, by fords, by boats, etc.

5. *Military Bridges*—Including an account of bridges improvised from the boats of the country; the construction and use of pontoon bridges; the repair and preservation of bridges; the theory and use of flying bridges; of bridges on casks and inflated skins; the attack and defense of the different kinds of bridges; with historical notices of military bridges in general.

6. *Field Fortifications*—Showing the mode of constructing the different kinds of field works, of attacking and defending the same.

7. *Theory of Fire*—Including the phenomena of the combustion of gunpowder; the theory of the flight of projectiles and principles of gunnery; discussion of the shapes and properties of projectiles, and the principles of target practice; calculation of initial velocity, etc.

8. *The Principles of Strategy*.

9. *Historical Sketch* of small arms, from the earliest times down to the present day.

10. *Practice* in making out ration returns; requests for transportation; requisitions for quartermaster's supplies; charges for ordinary breaches of discipline, etc.

The time allotted for instruction in this department is two hours per week, on Tuesdays and Fridays. The students are organized into a battalion of six companies. They are practically instructed in the schools of the soldier, the company, the battalion, and as skirmishers, according to the system of infantry tactics at present in use in the United States Army.

The military feature of the University is important and beneficial in many respects. In the event of war, it has been invariably found that previous military instruction and training has been of great service to the State, and especially advantageous to those who have received it. As conducted in this University, it does not interfere with instruction in the literary and scientific departments. The drill affords a healthful exercise, and contributes to physical development, and gives additional grace of carriage and general bearing. The discipline, while it is not so rigid as to be irksome, induces a respectful and courteous bearing. It promotes good order and decorum in the daily routine about the University buildings, and its advantages are especially seen on all occasions when the students are required to move in a body; and it contributes largely toward the cultivation of a proper *esprit de corps*.

THE SCIENTIFIC DEPARTMENTS,

INCLUDING

COLLEGES OF AGRICULTURE, MECHANICS, MINING, ENGINEERING, CHEMISTRY.

GENERAL STATEMENTS RESPECTING THE SCIENTIFIC COLLEGES.

OBJECTS.

The various Scientific Colleges of the University are designed to give the student a good introduction to the principles of modern science, together with special instruction in that particular department which he may choose. The law of the State requires the maintenance of five distinct colleges, or courses. These are Agriculture, Mechanics, Mining, Engineering, and Chemistry.

THE FIRST TWO YEARS.

The first two years of instruction, in all these colleges, include very nearly the same studies. A solid foundation is laid for all higher pursuits, by the careful study of mathematics and the elements of chemistry, natural philosophy, physical geography, etc., as well as of English, French, and German. At the beginning of the third year, the special subjects begin to predominate.

THE TWO ADVANCED YEARS.

In the two advanced years, the third and fourth of the full course, special attention is given to studies immediately relating to any one of the five colleges which the student may have elected—Agriculture, Mechanics, Mining, Engineering, or Chemistry. General studies receive a subordinate degree of attention.

SPECIAL COURSE STUDENTS.

Students who cannot spend four years at the University, but who are qualified to pursue the special studies here arranged for, are received as "Special Course Students," for a longer or shorter time. This is easier in the Colleges of Agriculture and Chemistry than in the other Colleges, which presuppose a considerable proficiency in mathematics.

COLLEGE OF AGRICULTURE.

GENERAL STATEMENTS.

Terms of Admission.—The terms of admission are the same as to the other Scientific Colleges, and are described on a previous page.

Special Students in Agriculture, not desiring the full course, are received for a longer or shorter period, and may attend only special lectures and recitations, and practical exercises, according to their requirements.

Methods of Instruction.—The instruction is given by experimental and illustrated lectures, recitations, essays, and class discussions, and in the practical application of principles, upon the University grounds. In addition, orchards, vineyards, farms, dairies, and other places of agricultural interest and importance will be visited by the class, as far as practicable, under the guidance and instruction of the Agricultural Professor.

The University domain is being developed, with a view to illustrate the capability of the State for special cultures, whether of forests, fruits, or field crops, and the most economical methods of production. It will be the station where new plants and processes will be tested, and the result made known to the public. The labor of students is employed, and paid for, whenever practicable.

The course of instruction during the first two of the four years constituting the undergraduate course, is the same as for the other Scientific Colleges, except in so far as the work in the chemical laboratory is more especially directed to subjects cognate to agriculture. During the two succeeding, or Junior and Senior years, the studies relating directly to the science and practice of agriculture are given chief prominence. The frequency with which the aim of such studies, and the attainable objects of agricultural colleges generally, are misunderstood, renders an explanation desirable. Those who consider agriculture as consisting merely in the manual work of plowing, planting, cultivating, harvesting, and the care of stock, justly ridicule the idea of its being taught in a college. Apprenticeship on a well-conducted farm, or in labor schools, is the proper means for attaining this end, since it does not necessarily imply material intellectual progress, or education, properly so called. It is not contended that such schools, or especially such apprenticeship, are not intrinsically useful and necessary. But the kind of training thus attained is clearly not that intended by the Act of Congress "for the liberal and practical education of the industrial classes," on which the agricultural and mechanical colleges of the several States are based; and experience in the East has abundantly shown that it is not the kind of education really desired by the industrial classes for their sons, since the want of patronage has in every case compelled a change toward the system which makes the manual exercise merely a means of fully illustrating the principles of rational agriculture. It is not that they may learn to plow or hoe a little better, but to learn why to plow or hoe at all, and when and where to do it to the best advantage, that parents are willing to dispense with their sons' services on the home farm. Without an educated judgment, directing the application of general principles under circumstances

infinitely varied, a little knowledge and a great deal of local routine habit acquired on a model farm, are but too apt to obscure common sense, and to render the possessor eminently unpractical everywhere else. It may be thought that a certain amount of obligatory manual labor, over and above that necessary for practice and illustration, might profitably be enforced to maintain the habit. But the period of four years, now allotted to the educational course, is so short, in regard to the multiplicity of subjects in which an educated agriculturist should have a respectable knowledge, that the time for merely mechanical exercise cannot reasonably be spared. It is considered a hardship by the student, since such labor cannot in any manner constitute a recreation from study; nor, if rendered obligatory beyond the requirement of illustration of principles, is it conducive to maintaining or creating in the student's mind a preference for agricultural pursuits. When such preference is not the result of habits acquired at home, or of natural bias, enforcement of manual labor is not likely to promote its acquisition.

The operations and exercises on the agricultural grounds are intended to subserve two distinct functions. The first is, to serve for the illustration of the course of instruction, and for such practice as is given to chemical students in the laboratory, or to engineering students in field practice. They will show in actual growth and cultivation, so far as possible, all the plants of importance in an agricultural point of view, as well as the operations and implements employed in their culture.

The second and essentially distinct function is the performance of experiments in cultivation, soil improvement, manuring, etc. Such experimental operations, from their very nature, can serve for instruction to a limited extent only, and while of the most direct importance to the practical cultivator, are not necessarily connected with educational institutions, and are, as a rule, quite the reverse of lucrative. Moreover, since soils and climates can neither be artificially made nor transported, each distinct agricultural region requires, in a measure, its own local experimental station.

The course of instruction by the Professor of Agriculture will hereafter be as follows:

SOPHOMORE YEAR.

First Term.—Structural and Physiological Botany.

Second Term.—Systematic and Economic Botany.

Descriptive Botany, with exercises in the analysis and determination of plants. Excursions will be made occasionally throughout the session, as the seasons may render them profitable.

Economic Botany. Description of plants useful and injurious to Agriculture, and their varieties.

JUNIOR YEAR.

First Term.—Agricultural Chemistry.

Chemistry of plants and their products. Nutrition of plants from atmospheric sources. Inorganic ingredients of plants, their importance and derivation; ash analysis. Physics of plants; mechanism of nutrition and movement of the juices. Germination and development of plants, and accompanying chemical changes.

Second Term.—Agricultural Chemistry (continued).

Chemistry and Physics of soils; their origin, formation, classifi-

cation. Physical properties, their determination and influence; mechanical analysis. Chemical composition; relation to vegetable nutrition; chemical analysis, its methods, utility, and interpretation.

Policy of Culture, and Maintenance of Fertility. Exhaustion of soils by irrational culture; rotation of crops, green-manuring, fallowing, sub-soiling, thorough drainage, irrigation; manures, their kinds, preparation, use, and value; the rational system of culture. General summary.

SENIOR YEAR.

First Term.—Culture.

Agricultural operations and implements, and their application in the cultivation of the several crops. Illustrative exercises in the agricultural grounds, whenever opportunity is afforded. Excursions.

Second Term.—Special Cultures, Stock-breeding, Dairying, etc.

It should be distinctly understood that for those intending to become practical farmers, a "practical course," or period of apprenticeship on one or several well conducted farms, subsequent to their course of study in the College of Agriculture, is considered to be as essential as it is in all other professions, all the world over. The requirements of instruction in principles, and those of financial success are, as a rule, incompatible; and the attempt to force them upon the student's mind simultaneously, usually results in a confusion of theory and practice, which forms a serious impediment to success in life. But a knowledge of the principles upon which it is based, renders the acquisition of practice easy, pleasant, and interesting, and at once relieves manual labor from the reproach of being mere drudgery, which so often repels our youth from the pursuit of agriculture.

In addition to the main library of the University, which contains some fourteen thousand volumes, and which is open during fixed hours to the students of all the Colleges, the Agricultural College has a special and select library of several hundred volumes, which relate directly to farm life and labor.

In the museum, which is now being arranged as rapidly as the finances of the University will permit, specimens of the botany of the State, and of many indigenous and exotic woods, can be examined by the students; and the cases in the lecture-room of the Professor of Agriculture also contain material of interest and value.

The private collection of Professor Hilgard, containing some twelve thousand specimens of American and foreign plants, which are arranged and classified expressly for purposes of instruction and investigation, is deposited in the lecture-room of this College for the use of the students.

The University also possesses the large collection of plants, rocks, etc., of the State Geological Survey, making, with the foregoing, an unusually extensive series of specimens for study.

The following works are required by the student, for study and reference, but the instruction in this department will by no means be confined to the text-book, but made as original, and consequently independent thereof, as possible: Gray's Structural and Systematic Botany; Gray's Field and Garden Botany; Botany of California; Allen's American Farm Book; Thomas' "Agricultural Implements;" Johnson's "How Crops Grow" and "How Crops Feed."

Most of the recent American books on Scientific Agriculture have been placed in the Agricultural Library, so as to be accessible to students for reference.

The leading agricultural journals of the United States, as well as those of California, can be found in the general library.

SCHEDULE OF STUDIES.

FOURTH, OR FRESHMAN CLASS.

First Term.—Mathematics—Algebra; French or German—(begun); Rhetoric; English Composition; Drawing—Free-hand.

Second Term.—Mathematics—Geometry; Chemistry—(recitations and laboratory practice); French or German; English Composition; English—History of the Language; Drawing—Free-hand.

THIRD, OR SOPHOMORE CLASS.

First Term.—Mathematics—Trigonometry, plane and spherical; Analytical Geometry; Chemistry; Physics—Heat; Structural and Physiological Botany; French or German; English Composition; Drawing—Industrial.

Second Term.—Mathematics—Analytical Geometry completed; Land Surveying and Leveling; Chemistry—(Qualitative Analysis); Physics; Botany—Systematic and Economic; French or German; History—(optional); Drawing—Industrial.

SECOND, OR JUNIOR CLASS.

First Term.—Agriculture—Chemistry of Plants and their Products; Inorganic Chemistry—Lectures; Analytical Chemistry; Mechanics; Zoology; German or French; History—(optional).

Second Term.—Agriculture—Chemistry and Physics of Soils; Policy of Culture, Maintenance of Fertility; Inorganic Chemistry—Lectures; Analytical Chemistry—(quantitative); Mechanics; Zoology; German or French—(elective); History of English Literature—(elective).

FIRST, OR SENIOR CLASS.

First Term.—Agricultural Operations and Implements; Organic Chemistry—Lectures; Analytical Chemistry—(quantitative); Physics—(elective); Geology; Astronomy—(elective); Political Economy.

Second Term.—Agriculture—Special Cultures, Stock-breeding, Dairying, etc.; Organic Chemistry—Lectures; Analytical Chemistry—Analysis of Soils, Manures, etc.; Physics—(optional); Geology; Law—Lectures—(optional); Thesis—(preparatory to graduation).

COLLEGE OF MECHANICS.

GENERAL STATEMENTS.

Terms of Admission.—These are stated on a previous page.

Objects of this Course.—This College will educate mechanical engineers, machinists (as far as they are constructors of machinery), and others who wish to devote their energies to such technical and industrial pursuits as involve a knowledge of machinery.

Course of Study.—The full course of study of four years includes, like the other Scientific Colleges, two preliminary years, which give a general literary culture, besides the requisite mathematics.

The two advanced years give as much of the Civil Engineering Course as may be found necessary for the purposes of this College, including Mathematics, Physics, and Theoretical Mechanics. But the chief object will be to teach Applied or Industrial Mechanics; to show how the forces of nature are employed for industrial purposes; and to discuss the nature of the different constructions or machines contrived by human ingenuity.

Special attention is given to Industrial Drawing. The instruction in this department will be directed, in the advanced years, to the construction of machinery as the principal object, and will advance as the instruction in Applied or Industrial Mechanics advances.

Special Instruction in Applied Mechanics—The Course of Applied or Industrial Mechanics during the third and fourth years will be as follows:

THIRD YEAR.

1. *Statics of Solids*: General principles of statics; center of gravity; equilibrium of restrained bodies (elastic and rigid); friction and rigidity of chords; application of the principles of statics to resistance of material; neutral surface of a deflected beam; shearing and torsional resistance; strength of pillars; compound resistance.

2. *Dynamics of Solids*: Moment of inertia; centrifugal force; restrained motion under the influence of gravity; impact.

3. *Statics of Fluids*: Equilibrium and pressure of liquids; buoyancy; molecular action of water; equilibrium and pressure of air.

4. *Dynamics of Fluids*: General principles of discharge; influence of contraction and friction; flow through pipes; influence of sudden change in cross section; discharge under variable pressure; discharge and flow of air; motion of fluids of varying density; reaction and impact.

5. Application of mechanics to statical structures, with special reference to the construction of machines.

FOURTH YEAR.

General introduction to the application of mechanics, power, useful effect, work.

Prime Movers: Recipients for animal power, and that of water and wind; dynamometers; animal power; application of hydraulics to the reception and discharge of water (as use for water-power); vertical water-wheels; horizontal wheels (turbines); water-pressure engines; wind-mills.

Heat, Steam, and Steam Engines: Mechanical equivalent of heat; properties of steam, and appliances for its generation; steam engines; heat engines in general, and their efficiency.

Elementary Forms of Mechanism: General principles; interposed mechanism or communicators; wheel work, producing motion by rolling and rapping contact; mechanism for modifying motion; screw; cam; producing motion by sliding contact; unusual means employed for modifying motion; variable motion by rolling contact; regulators and accumulators of motion.

Working Machines—1. Hoisting and transportation: Lifting jacks, hydraulic press, hoists, hydraulic hoists, cranes, pile engine; application of hoisting machinery in mining; means employed for raising water.

2. Transmission of air by heat, compression or expansion, inertia, and water.

3. Machines employed for change of form: Stamp mills, steam and tilt hammers, and so forth.

4. Machines used in the arts of construction and for domestic purposes: Excavator, dredging, drilling and punching machines, saw mills, riveting machines, and so forth.

BOOKS RECOMMENDED FOR REFERENCE: Rankine's Manual of Applied Mechanics, and Weisbach's Mechanics.

SCHEDULE OF STUDIES.

FOURTH, OR FRESHMAN CLASS.

First Term.—Mathematics—Algebra; French or German—(begun); Rhetoric; English Composition; Drawing—Free-hand; Spanish and Italian—(optional through the course).

Second Term.—Mathematics—Geometry; Chemistry—recitations and laboratory practice; French or German; English Composition; English—History of the Language; Drawing—Free-hand.

THIRD, OR SOPHOMORE CLASS.

First Term.—Mathematics—Trigonometry, plane and spherical; Analytical Geometry; Chemistry; Physics—Heat; Botany; French or German; English Composition; Drawing—Free-hand.

Second Term.—Mathematics—Analytical Geometry completed; Descriptive Geometry (Shades, Shadows, Linear Perspective, Isometric Projection); Land Surveying and Leveling; Chemistry; Physics; French or German; History—(optional); Drawing—Industrial.

SECOND, OR JUNIOR CLASS.

First Term.—Theoretical and Applied Mechanics—Lectures and Exercises; Mechanics; Zoology; Differential and Integral Calculus; German and French; History—(optional); Drawing—Industrial.

Second Term.—Theoretical and Applied Mechanics—(continued); Mechanics; Zoology—(elective); Integral Calculus and Calculus of Variations; German or French—(elective); Drawing—Industrial.

FIRST, OR SENIOR CLASS.

First Term.—Theoretical and Applied Mechanics—Lectures and Exercises; Astronomy; Physics; Geology; Political Economy; Drawing—Industrial.

Second Term—Theoretical and Applied Mechanics—(continued); Physics; Geology; Law—Lectures—(optional); Drawing—Industrial; Thesis—(preparatory to graduation).

COLLEGE OF MINING.

GENERAL STATEMENTS.

Terms of Admission.—The requirements are the same as for the other Scientific Colleges, and are stated on a previous page.

Course of Instruction.—The four years course of instruction leads to the degree of Bachelor of Philosophy. Students who desire to receive the degree of Mining Engineer must continue their studies for at least two years more, and must exhibit to the Faculty satisfactory evidence of their power to apply, in actual work, the knowledge they have acquired.

During the first two years of undergraduate work, the studies of the course are the same as those of the other Scientific Colleges in the University of California. During the last two years the attention is directed chiefly to Chemistry, Metallurgy, Mining, Geology, Mineralogy, and Mechanical and Civil Engineering, though the study of modern languages is also kept up. The scientific studies are taught, as far as possible, with reference to their applications in mining, and the entire work of the last two undergraduate years and the post-graduate course is overlooked by the Lecturer on Metallurgy and Mining, under whose special guidance the mining students come.

The post-graduate years are devoted mainly to the study of Mining and Metallurgy, including studies on the spot of mines and smelting works, and essays embodying the results of observation.

Opportunities will be afforded to the class to visit some of the industrial establishments of San Francisco, and they will be encouraged to extend their visits to mining and metallurgical works at a distance.

Collections and Laboratories.—The Laboratories for work in Chemistry are new, extensive, and well furnished. They afford excellent opportunities for becoming proficient in Analytical Chemistry.

A Metallurgical Laboratory, designed to offer the very best facilities for the study of assaying, and to contain machinery and other appliances for the study of metallurgical processes, will be built during the present year.

The engineering instruments and the physical apparatus are also of the best kind.

A collection of beautiful models of furnaces was received from Europe last year, as well as one of furnace products.

The collection of Ores, Fossils, and Minerals are remarkable, including:

1. The materials of the Geological Survey of California, brought together by Professor J. D. Whitney, State Geologist.

2. The valuable mineralogical collection of Mr. H. G. Hanks, given to the University by Mr. James R. Keene.

3. The collection of ores, rocks, fossils, etc., collected by Mr. C. D. Voy, and presented by Mr. D. O. Mills.

4. The cabinet of the late Mr. F. L. A. Pioche.

5. The numerous gifts of other individuals.

The University also owns a large collection of the Ward Geological Casts.

SCHEDULE OF STUDIES.

FOURTH, OR FRESHMAN CLASS.

First Term—Mathematics—Algebra; French or English (begun); Rhetoric; English Composition; Drawing—Free-hand; Spanish and Italian—(optional through the course).

Second Term—Mathematics—Geometry; Chemistry—recitations and laboratory practice; French or German; English Composition; English—History of the Language; Drawing—Free-hand.

THIRD, OR SOPHOMORE CLASS.

First Term—Mathematics—Trigonometry, plane and spherical; Descriptive Geometry; Chemistry; Physics—Heat; Botany; French or German; English Composition; Drawing—Industrial.

Second Term—Mathematics—Descriptive Geometry (Shades, Shadows, Linear Perspective, Isometric Projection); Analytical Geometry; Chemistry; Physics; French or German; History; Drawing—Free-hand.

SECOND, OR JUNIOR CLASS.

First Term—Mineralogy—Land and Mine Surveying and Leveling; Field-practice; Differential and Integral Calculus; Chemistry; Analytical Chemistry; Mechanics; German or French; Drawing—Industrial.

Second Term—Mining; Mineralogy; Land and Mine Surveying and Leveling; Field-practice; Integral Calculus and Calculus of Variations; Chemistry; Analytical Chemistry; Mechanics; German or French—(optional).

FIRST, OR SENIOR CLASS.

First Term—Metallurgy; Mineralogy; Analytical Chemistry and Laboratory Work; Astronomy; Physics; Geology; Political Economy.

Second Term—Metallurgy and Assaying; Mineralogy; Analytical Chemistry and Laboratory Work; Physics; Geology; Law—Lectures—(optional). Thesis—(preparatory to graduation).

The special studies of this branch are continued through two Post-graduate years.

COLLEGE OF ENGINEERING.

SPECIAL STATEMENTS.

Terms of Admission.—These are given on a previous page.

Objects of the College.—The object of this College is to give thorough instruction in those studies which pertain to the profession of a Civil Engineer. To a very considerable extent, these studies are likewise preliminary to the profession of an Architect. They are also serviceable to all who wish proficiency in the application of Mathematics and Physics, either with reference to teaching or to other pursuits.

The Course of Study.—The full course of study includes two preliminary years, in which are given not only the requisite mathematics, but many branches of general literary culture, the same as in the other Scientific Colleges; and also, two advanced years in which the engineering and mathematical studies predominate. In the advanced years, instruction is also given to the students of this College in Physics, Geology, Zoology, and in certain literary branches, including Modern Languages and Political Economy, with the intention of promoting, so far as can be done in the limited time, professional excellence and intellectual culture.

Special Instruction in Engineering begins with the Surveying Course, including Land Surveying, Leveling, Topographical Surveying, Use of the Plane Table, Road and Railroad Surveying and Construction, with computations of earthwork required by excavations, tunnels, and embankments. A liberal amount of time is allotted to practice in the field, and to the use of instruments, such as the compass, level, field transit, plane-table, etc., and in the working up and plotting of field notes. Topographical drawing and map-making are taught in connection with this part of the course. During the present year an accurate topographical survey has been made, by the class, of the grounds immediately surrounding the University buildings. This will be mapped by them, and the work continued by successive classes till the entire tract is accurately plotted. The use of the Aneroid and Mercurial Barometers is taught, and practice given in the determination of heights, etc.

Journeys over the adjacent roads are made for the purpose of constructing itineraries, and of measuring and estimating distances by the eye alone, or with the ordinarily available means of assistance. Sketches will be made of the surrounding country, and directions of hill ranges, streams, etc., will be taken as the basis of reconnaissance maps.

Students proficient in this course will be well fitted to undertake the work of the Field Engineer.

In the fourth year of the course, the characteristics and properties of the various building materials, wood, stone, iron, steel, mortar, mastic, etc., their strength, uses, and different methods of employment in structures, are discussed. The rules governing the construction of works of masonry, including foundations in dry and wet soils, and under water, stone bridges, dams, sewers, culverts, and retaining walls are acquired.

Problems, relating to the more difficult constructions of masonry, such as groined, cloistered, askew, and rampant arches, domes, and walls bounded by warped surfaces, etc., are solved, and by means of them working plans are drawn.

The principles and practice of framing, bridge and truss building, and the construction of estimates and working plans, are investigated; and the preparation of a careful thesis, on some topic in engineering, selected or approved by the Professor of Engineering, terminates the undergraduate course, leading to the Degree of Bachelor of Philosophy (Ph. B.).

A practical bearing is given to the instruction of this year by the solution of interesting problems, connected with the subjects taught; and by visits to important structures, completed or in process of construction, which are accessible.

The beautiful varied nature of the grounds at and about the University affords the finest field for practice in the various kinds of surveying; the department is well supplied with the necessary instruments, models, drawings, and maps, used in such instruction, and will avail itself of a generous gift from a citizen of Oakland, to further increase its collection.

Visits to Places and Objects of Special Interest to Engineers.—It is the intention of the Professor of Engineering, from time to time, as opportunity offers, to accompany his classes to places and objects of special interest to engineers. Among the works visited, or to be visited, are the following:

The fortifications of earthwork and of masonry in or near San Francisco Harbor.

The shops for preparing artificial stone.

The wood-preserving works.

Rolling mills and foundries.

Offices of Civil and Military Engineers.

United States Government buildings in San Francisco.

California Dry Dock.

United States Navy Yard at Mare Island.

Macadam and other roads in process of construction, stone quarries, and stone-breaking machines.

Golden Gate Park.

Spring Valley Water-works and Reservoirs.

Acknowledgments from the University are due to the officers and Superintendents of the above places, for their kindness and politeness in admitting students, and describing and explaining to them the various objects and processes seen.

SCHEDULE OF STUDIES.

FOURTH, OR FRESHMAN CLASS.

First Term.—Mathematics—Algebra; French or German—(begun); Rhetoric; English Composition; Drawing—Free-hand; Spanish or Italian—(optional through the course).

Second Term.—Mathematics—Geometry; Chemistry—(recitations and laboratory practice); French or German; English Composition; English—History of the Language; Drawing—Free-hand.

THIRD, OR SOPHOMORE CLASS.

First Term.—Mathematics—Trigonometry, plane and spherical; Descriptive Geometry; Chemistry; Physics—Heat; Botany; French or German; English Composition; Drawing—Industrial.

Second Term.—Mathematics—Descriptive Geometry (Shades, Shadows, Linear Perspective, Isometric Projection); Analytical Geometry; Physics; French or German; History; Drawing—Industrial.

SECOND, OR JUNIOR CLASS.

First Term.—Land Surveying, Leveling, and Topography, and use of Plane Table; Engineering Drawing; Mechanics; Zoology; Differential and Integral Calculus; German or French; History—(optional).

Second Term.—Road and Railroad Surveying, and Building—Geodesy and Reconnoissances; Computations of Earthwork; Engineering Drawing; Mechanics; Zoology—(elective); Geology; Integral Calculus and Calculus of Variations; German or French—(elective).

FIRST, OR SENIOR CLASS.

First Term.—Properties of Building Materials; Engineering Drawing; Astronomy—Use of Solar Compass; Physics; Geology; Political Economy.

Second Term.—Framing, Bridge Building, and Foundations; Engineering Drawing; Practical Astronomy; Physics; Law—Lectures—(optional); Thesis—(preparatory to graduation).

COLLEGE OF CHEMISTRY.

SPECIAL STATEMENTS.

Terms of Admission.—The requirements are stated on a previous page.

Objects of this College.—The course of instruction in the College of Chemistry is designed for those who wish to become professional chemists, either as teachers and investigators, or as metallurgists, assayers, and manufacturers in chemical industries; and also for those who wish to become expert chemists preparatory to the pursuit of medicine, pharmacy, mining, etc.

The students of the Colleges of Agriculture, Mining, etc., have also the advantages of the chemical laboratory, but give a less amount of time to laboratory work than those who are specially enrolled in the College of Chemistry. Elementary instruction is also given to literary students.

The Course of Study.—The full course of study of four years includes the same preliminary instructions as are given in the other Scientific Colleges, except that in the third term of the second year the student may take Surveying or Crystallography in place of Descriptive Geometry. It includes, also, during the third and fourth years, instructions in Mineralogy, Physics, Geology, Zoology, and in certain literary branches, including Modern Languages and Political Economy.

The special teaching in Chemistry may be thus described :

Instruction is given in General and Theoretical Chemistry by lectures, recitations, and laboratory practice. This course extends through three terms—one in Freshman year and two in Sophomore year, and embraces the elements of Inorganic and Organic Chemistry. Students, after making themselves familiar with the details of experiments, are required to repeat the same in the laboratory for Elementary Chemistry.

An advanced course of lectures will be given to students of the Junior and Senior classes in General and Theoretical Chemistry. This course will embrace a discussion of the general principles of the science, and their application to Analytical and Metallurgical Chemistry, and to Mineralogy.

The chemical laboratories will be open daily for instruction in Analytical Chemistry.

The course of instruction in qualitative analysis will include the analysis of simple and complex substances in the wet way, their analysis by the use of the blow-pipe and flame reactions, and the determination of minerals with the blow-pipe. Students will be required to keep a careful record of their work, and to submit the same to the inspection of the Professor. Upon passing a satisfactory examination in qualitative analysis, students may pass to the quantitative laboratory.

In the quantitative laboratory instruction will be given in the quantitative gravimetric analysis of simple and complex salts, minerals, ashes of plants, mineral waters, etc.; in volumetric analysis, including acidimetry, alkadimetry, chlorimetry, etc.; in organic analysis; in gas analysis; in the preparation from inorganic and organic compounds, and in the carrying out of original investigations.

Students taking the course of Chemistry will be expected to spend at least fifteen hours a week in the laboratory during the Junior year, and twenty hours a week during the Senior year.

Every opportunity possible is made use of to give instruction in those branches of Chemistry which have a practical application to the arts. For example: a room for the study of photography, in connection with the chemical laboratory, will be opened as soon as the necessary apparatus can be supplied.

Practical instruction in electro-metallurgy will be given to such students as desire it.

Students in Agriculture will receive special instruction in the analysis of manures, including the determination of phosphoric acid and nitrogen, etc.

So far as practicable, students will be employed in the preparation of chemicals used in the laboratories, the object being to give them as much practice in Manufacturing Chemistry as possible.

Special training in the analysis of mineral waters will be given to such of the advanced students in Chemistry as may desire it.

Careful lists of waste products, minerals, etc., which may be utilized, will be kept, and students instructed in methods of saving them.

Special Students in Chemistry.—The advantages of the laboratory and lectures are open not only to those who pursue a full course of instruction, but to those who wish for a short period to pursue some special course, or carry on some special investigation. It should, however, be understood that this permission is not designed to furnish a means of escape from regular courses of study, but is for the

benefit of persons who are already somewhat advanced in knowledge, and who desire to become acquainted with modern Chemistry.

Visits to Chemical Establishments.—It is the intention of the Professor of Chemistry to encourage the students to visit the various chemical and metallurgical works of the vicinity, so far as this is practicable.

The Chemical Laboratory.—The Chemical laboratory, at Berkeley, has been fitted up at a large expense, and in accordance with the best experience of European and American laboratories. There are two main rooms—an upper and a lower room. The former is intended for quantitative analysis and original investigations, and has accommodations for thirty-two students. Adjacent to it are the laboratory and study of the Professor of Chemistry, the balance room, and fusion room. The lower room is intended for qualitative analysis, and has also accommodations for thirty-two students. The laboratories are open daily, including Saturdays.

Charges for Chemicals.—Students may be supplied with the necessary apparatus for chemical analysis from the laboratory. This will be charged to them, and may be returned to the laboratory if uninjured. Students will provide themselves with platinum ware and weights.

A charge of fifteen dollars per term will be made for chemicals used in chemical analysis. Students needing assistance, who are able and willing to render service in return for chemicals, may make application to the Professor.

SCHEDULE OF STUDIES.

FOURTH, OR FRESHMAN CLASS.

First Term.—Mathematics—Algebra; French or German—(begun); Rhetoric; English Composition; Drawing—Free-hand; Spanish and Italian—(optional through the course).

Second Term.—Mathematics—Geometry; Chemistry—(recitations and laboratory practice); French or German; English Composition; English—History of the Language; Drawing—Free-hand.

THIRD, OR SOPHOMORE CLASS.

First Term.—Mathematics—Trigonometry, Plane and Spherical; Analytical Geometry; Chemistry; Physics—Heat; Botany; French or German; English Composition; Drawing—Industrial.

Second Term.—Mathematics—Analytical Geometry; Land Surveying and Leveling; Chemistry—(qualitative analysis); Botany—(elective); French or German; History—(elective); Drawing—Industrial.

SECOND, OR JUNIOR CLASS.

First Term.—Inorganic Chemistry—Lectures; Analytical Chemistry; Mechanics; Zoology; Mineralogy; German or French; History—(optional).

Second Term.—Inorganic Chemistry—Lectures; Analytical Chemistry; Mineralogy; Mechanics; Zoology—(elective); French or German—(elective).

FIRST, OR SENIOR CLASS.

First Term.—Organic Chemistry—Lectures; Analytical Chemistry; Mineralogy—Laboratory Practice; Geology; Astronomy—(elective); Metallurgy—(elective); Political Economy.

Second Term.—Organic Chemistry—lectures; Analytical Chemistry; Mineralogy—Laboratory Practice; Physics; Geology; Law—Lectures—(optional); Thesis—(preparatory to graduation).

COLLEGE OF LETTERS.

SPECIAL STATEMENTS.

Objects.—The College of Letters maintains two courses: one of them corresponding to the Classical Course, with which the public are familiar; and the other giving prominence to the Modern Languages, History, and Literature. The former, which is known as "the Classical Course," leads to the traditional degree of Bachelor of Arts; the latter, which is known as "the Literary Course," leads to the degree of Bachelor of Philosophy. In both these courses a liberal amount of time is bestowed upon the principles of modern science.

One or the other of these two courses will be found adapted to those who desire to lay a broad foundation of literary, historical, and scientific culture as a basis for further professional study. Those who expect to become teachers will notice the adaptation of these courses to their future vocation.

THE CLASSICAL COURSE.

Terms of Admission.—The terms of admission to the Classical Course are as follows:

Candidates must pass a satisfactory examination in the same studies as candidates for the Colleges of Science (see a previous page), and in the following *additional* studies: *Latin Grammar*, including prosody; *Cæsar*, four books; *Virgil*, Eclogues, Georgics, and six books of the *Æneid*; *Cicero*, six orations; *Greek Grammar*, including prosody; *Xenophon's Anabasis*, four books; *Homer's Iliad*, two books (omitting the catalogue). For the *Anabasis*, equivalents will be accepted from Goodwin's Greek Reader.

Candidates will also be examined in the first forty-five pages of Allen & Greenough's *Latin Composition*, and in Jones' *Greek Composition*, or in their equivalents.

Candidates for advanced standing, whether from other Colleges or not, in addition to the preparatory studies, are examined in those already pursued by the classes which they propose to enter.

Applicants should be at least sixteen years of age, and must bring satisfactory testimonials. Young ladies, as well as young men, are received as students.

Outline of the Course.—An outline of the course may thus be given:

In Latin, the authors read are: Livy (History), Horace (Odes, Epistles, and Satires), Cicero (on Old Age, on Oratory, the Oration for Cluentius, Tusculan Disputations), Plautus (Captives), Terence

(Andria), Tacitus (Histories), Pliny (Epistles), Juvenal (Satires), Quintilian (on Oratory), Zucetius (on the nature of things), Catullus (Poems).

In Greek, the student will read: Homer (Odyssey), Herodotus, Æschylus (Prometheus), Sophocles (Antigone), Euripides (Alcestis), Plato (Gorgias, Apology, Crito, and Phædo), Xenophon (Memorabilia), Thucydides, Demosthenes (Oration on the Crown, and Select Orations), Lysias (Select Orations), Aristophanes (Clouds, Frogs, or Birds).

Professor Kellogg gives the following course of lectures:

On the Geography of the Roman Empire (Freshman year);

On Roman Archæology (Sophomore year);

On Roman Literature (Junior year);

On Comparative Philology (Senior year).

Professor Bunnell lectures to the Junior Class on Grecian Antiquities. This course of lectures includes the Archæology of Literature, Art, etc.

To the Senior Class, he lectures on Greek Literature and Philosophy; also, on Greek Law and Politics.

In Latin, the grammars of Allen & Greenough and of Harkness are used, with references to Madvig's. The first-named is recommended to beginners. Hadley's Greek Grammar and Goodwin's Greek Grammar are used. The latter is recommended to preparatory classes. Liddell & Scott's Greek Lexicon and Andrews' or White's Latin Lexicon are also recommended.

All the instruction in Latin and Greek aims to bring out the relations of those languages to our own.

Prominence is given in the classical course to such works, preceptive or illustrative, as bear on the art of public speaking.

Latin and Greek prose composition receive attention during the first two years.

Other studies are: Ancient and Modern History, the English Language, with constant practice in Composition, English Literature, Rhetoric, Logic, Mental and Moral Philosophy, German, and French.

Students in this course pursue the study of Mathematics through Algebra, Geometry, Analytical Geometry, Surveying, and Mechanics.

In Science they pursue the study of Physics, Botany, Zoology, Geology, Chemistry, Mineralogy, and Astronomy.

In addition to the courses of lectures specified above, there are courses on English Literature, Political Economy, and Law.

SCHEDULE OF STUDIES.

FOURTH, OR FRESHMAN CLASS.

First Term—Latin—Livy (One Book), Cicero, De Senectute, Latin Composition; Greek—Homer, Odyssey; Herodotus; Xenophon, Memorabilia; Mathematics—Algebra; Written Translations; Geography of the Roman Empire—Lectures; German or French; Spanish, Italian, Hebrew—(optional through the course).

Second Term—Latin—Horace, Odes, Epistles, and Ars Poetica; Latin Composition; Greek—Plato, Phædo; Demosthenes, Third Olynthiac; Thucydides; Mathematics—Algebra, completed; Geometry; English Composition; German or French.

THIRD OR SOPHOMORE CLASS.

First Term—Latin—Tacitus, Histories; Pliny, Epistles; Latin Composition; Greek—Plato, Apology and Crito; Greek Composition; French or German; English Language—History and Structure; English Composition; Mathematics—Trigonometry, Plane and Spherical; Analytical Geometry; Physics—(optional); Botany—(optional); Roman Archæology—Lectures.

Second Term—Latin—The Captives of Plautus; The Andria of Terence; Greek—Æschylus, Prometheus; Euripides, Alcestis; French or German; History; English Composition; Mathematics—Analytical Geometry; Surveying; Physics; Mechanics.

SECOND, OR JUNIOR CLASS.

First Term—Latin—Cicero and Quintilian, in Kellogg's "Ars Oratoria"; Greek—Sophocles, Antigone; Lysias, Select Orations; French or German—(elective); History; History of English Literature—(elective); English Composition—(elective); Anglo-Saxon—(elective); Zoology—(elective); Chemistry; Grecian Antiquities—Lectures.

Second Term—Latin—Juvenal; Horace, Satires; Greek—Plato, Gorgias; French or German—(elective); History of English Literature—(elective); English Composition—(elective); Psychology; Anglo-Saxon—(elective); Physics; Zoology—(elective); Roman Literature—Lectures; Grecian Antiquities—Lectures.

FIRST, OR SENIOR CLASS.

First Term—Latin—Cicero pro Cluentio, or Tusculan Disputations—(elective); Greek—Demosthenes on the Crown—(elective); French or German—(elective); English—Select Prose—(elective); English Composition; Moral Philosophy; Psychology—(elective); Anglo-Saxon—(elective); Political Economy; Physics; Geology; Astronomy; Greek Literature and Philosophy—Lectures; Comparative Philology—Lectures.

Second Term—Latin—Lucretius; Catullus—(elective); Greek—Aristophanes, Frogs, Clouds, or Birds—(elective); French or German—(elective); Linguistics—Whitney's Language and Study of Language; English—Select Poetry—(elective); English Composition; Anglo-Saxon—(elective); Logic; Political Economy—Lectures and discussions—(elective); Physics; Geology—(elective); Law—Lectures (optional); Greek Law and Politics—Lectures; Thesis—(preparatory to graduation).

THE LITERARY COURSE.

Terms of Admission.—Candidates must pass a satisfactory examination in the same studies as candidates for the Colleges of Science (see a previous page); and, in addition, in the Latin Grammar and Reader, and four books of Cæsar. It is strongly recommended, also, that at least one of the modern languages be studied before entering. As a test of proficiency in practical Grammar and Composition, each candidate will be required to write a short English exercise, which he must be able to analyze and parse. Those who enter with the broadest and best preparation will form a division by themselves.

Outline of the Course.—The History and Structure of the English Language are studied in the first two years. The critical study of Masterpieces in English Literature is begun. Rhetoric is studied.

Compositions are written. Ancient History is pursued in the first year, and General History is begun. French or German is studied in the first year, and both languages in the second year. Latin is studied in the first year. Lectures are given in the first year on History, ancient and modern, and also on the Geography of the Roman Empire. Chemistry is begun in the first year, and continued into the second. Botany may be pursued optionally. Algebra, Geometry, and Trigonometry are studied. Physics is studied in the second year.

In the last two years the study of English is continued into Anglo-Saxon and Comparative Grammar, and Early English. The History of English Literature is pursued. Select Prose and Verse is critically studied. Practice is given in writing and speaking. History is continued. The Modern Languages are continued. Political Economy is studied. Comparative Philology is commenced. Other studies are: Mental and Moral Philosophy, Mechanics, Surveying, Mythology, Zoology, and Geology.

SCHEDULE OF STUDIES.

FOURTH, OR FRESHMAN CLASS.

First Term—Rhetoric; Composition—Description, Narration; Mathematics—Algebra; French or German; Latin; The Culture of the Intellect—Lectures; Geography of the Roman Empire—Lectures; Spanish, Italian, Hebrew—(optional through the course).

Second Term.—English Language—Hadley; Composition—Exposition, Argument; Mathematics—Algebra, Geometry; French or German; Chemistry—Text-book and Laboratory; Latin; Lectures on Books.

THIRD, OR SOPHOMORE CLASS.

First Term.—English Language and Literature; Study of Masterpieces; Composition—Exposition and Argument, Imaginative, etc.; Mathematics—Trigonometry, plane and spherical; French; German; Physics; Chemistry—Lectures and Laboratory; Library Work, with Lectures.

Second Term.—English Language—Earle's "Philology;" Composition—Account of Books Read, Historical Investigations, etc.; Mathematics—Analytical Geometry; Surveying; French; German; History.

SECOND, OR JUNIOR CLASS.

First Term.—Anglo-Saxon Grammar; History of English Literature; Composition—Literary Studies; Sketches, prose or verse, etc.; History; German; French; Chemistry—(elective).

Second Term.—Anglo-Saxon and Early English Literature; History of English Literature; Composition—Character Studies, Literary Criticism, etc.; Mental Philosophy—Carpenter's Mental Physiology; German; French; Zoology—(elective); Physics; Chemistry—(elective); Grecian Antiquities—Lectures—(elective).

FIRST, OR SENIOR CLASS.

First Term.—English—Select Prose; Composition—Special Investigations; Political, Æsthetic, Philosophical; Comparative Philology—(elective); Political Economy; Psychology—Herbert Spencer

—(elective); Moral Philosophy; Anglo-Saxon—(elective); German or French—(elective); Astronomy—(elective); Geology; Physics.

Second Term.—English—Select Poetry; Composition—Philosophical, Literary, Oratorical; Logic; Political Economy—Lectures and Discussions; Linguistics—Whitney's Language and Study of Language; German or French—(elective); Physics—(elective); Lectures on Law—(optional); Geology—(elective); Anglo-Saxon—(elective); Thesis—(preparatory to graduation).

WANTS OF THE UNIVERSITY.

MORE ROOM FOR INSTRUCTION.

The large increase in the number of students recently admitted to the University, has created a necessity for more rooms for purposes of instruction. The large room in the south end of the basement of the North Hall, formerly used as the "Students' Club-room," has been subdivided and utilized as recitation-rooms. But we are still sadly in want of *more* and *better* accommodations for classes. And should the number of students continue to augment, the embarrassment would become extreme.

I.—LARGE BUILDING FOR LIBRARY AND MUSEUM.

The construction of an appropriate building for the Library and Museum, would give us *nine* (9) additional rooms in the South Hall for the purposes of instruction. It is well known that the rooms in the South Hall, at present devoted to the accommodation of the Library and Museum, are not specially adapted for these purposes, being only a temporary arrangement until a proper building could be constructed. Moreover, the room now occupied as a Library, is already too small for the proper arrangement of the fourteen thousand volumes belonging to the University. And as regards the Museum accommodations, you are aware that only a *portion* of the collections can be properly arranged for instruction and exhibition.

The Library and Museum might be included in a large two-story building, constructed entirely, both externally and internally, of *incombustible materials*, the lower floor being occupied by the Library, and the upper floor by the Museum. This building should be large enough to meet the *probable wants of the future*. For several years to come, the *surplus rooms* might be utilized for educational purposes. Such a structure, adapted alike to the present and future wants of a growing Institution, must necessarily be costly; it will constitute an enduring monument to the generosity of the State which offers to her sons and daughters the opportunities and the means of the largest and the most generous culture.

II.—AUDITORIUM, GYMNASIUM, DRILL-ROOM.

The University is, likewise, sadly in want of a capacious Hall or *Auditorium* for conducting the Exercises at Commencement, and for other occasions. This might be included in the same structure con-

taining the Library and Museum; but this would require so large a building, of so enormous a cost, as to tax the generosity of the State. Under these circumstances, it may be deemed better to construct a cheap one-story *wooden building* of ample dimensions, which would subserve several purposes, viz: as an *Auditorium*, a *Gymnasium*, and a *Military Drill-room*, to which could be attached an *Armory*.

III.—PHYSICAL LABORATORY.

In connection with the Department of Physics and Mechanics, it is highly important to establish a "Physical Laboratory," where students will have an opportunity of experimentally verifying the laws of Mechanics and Physics, which are illustrated in the lecture room. Under the guidance of the Professor or a trained Assistant, the student receives a thorough practical course of instruction in experimental researches bearing upon the subjects of his special study. He will thus experimentally study those *methods* of making *measures of precision* which are used in all physical determinations. By such means as this, not only will *facts* and *laws* be impressed in a manner which no other process can produce, but a *training* will be given in methods of investigation which will be invaluable for the mastery of the new and varied problems of actual work.

For this purpose, it will be necessary that the "Physical Apparatus" should be supplemented by the addition of a number of "Instruments of Precision." These are *neccessarily costly*; but they could be gradually accumulated by a comparatively small *annual* expenditure. Three or four thousand dollars in the beginning would furnish the basis for the establishment of a physical laboratory.

A separate room will be required. The room in the third story of the North Hall, immediately over the "Physical Lecture Room," would be the most convenient for this purpose. The Apparatus Room could be put in communication with the Physical Laboratory by means of a "dumb waiter."

IV.—BIOLOGICAL AND ZOOLOGICAL LABORATORY.

Equally important is the establishment of a "Biological and Zoological Laboratory" in connection with the Department of Natural History, where Physiology and Comparative Anatomy may be studied by practical work under the supervision of a Professor or trained Assistant. In connection with this, it is quite essential to have a "Zoological Station" and an Aquarium at some convenient place on the coast. The feature which I regard as of paramount importance is that such Experimental Laboratories furnish the appliances and means of undertaking *original investigations*. Such establishments in Europe have not been barren of results; on the contrary, they have overflowed on all sides, and enriched alike the domain of thought and of discovery. In fact, no Institution can take rank in this age which overlooks these potent aids to education and research.

V.—PHYSICAL OBSERVATORY; MAGNETIC; ETC.

As preliminary to the establishment of an Astronomical Observatory in the future, it is desirable to construct a suitable building where, by means of a good telescope of moderate cost, with accompanying spectroscopic instruments, observations on the physical characters of the heavenly bodies can be made. In the same struc-

ture, provision could be made for carrying on several other classes of physical observations, viz:

(a.) *Magnetic Observations*, by means of the set of self-registering magnetic instruments offered to the University by Professor Peirce, the late Superintendent of the United States Coast Survey.

(b.) *Earthquake Observations*, by means of the most improved self-recording apparatus which have been devised in modern times.

(c.) *Meteorological Observations*, by means of the best instruments which can be procured.

During the summer of eighteen hundred and sixty-nine, one of your architects furnished the plans of a structure suitable for these purposes, at an estimated cost, I think, of about five thousand dollars. The outfit of instruments, etc., would cost, perhaps, as much more. To this must be added the salary of a competent trained observer.

VI.—INCREASE OF LIBRARY.

There is urgent need of a large number of books for the Library of the University. These are the *tools* which are essential to the proper performance of the work of the instructors. The Library is sadly deficient, in many departments, in books of *reference*. These are costly, and not to be found in private libraries. A special appropriation is needed for this purpose of at least ten thousand dollars for the two years.

VII.—IMPROVEMENT OF UNIVERSITY GROUNDS.

The grounds belonging to the University are sadly in need of permanent improvement. A vast amount of grading has to be done before the grounds can assume the aspect which convenience and good taste alike demand. The amount required for this purpose will be considerable, not less than twenty thousand dollars for the two years; but the expenditure will be of *permanent value*.

VIII.—ADDITIONAL INSTRUCTORS.

In order to carry out the liberal scheme of the University, it is almost needless to remind you, that it is absolutely necessary that the staff of instructors should be augmented. For the last two years our teaching force has been cut down to a *minimum*, in consequence of the lack of funds. In the Colleges of Science, it is evident that little can be accomplished in the way of instruction in the details of the *special courses* appropriate to each college by the unassisted labors of a single instructor. In the Colleges of Mechanics and of Mining this has been a most serious impediment to the proper organization of the courses of instruction. The increasing interest manifested by the students in selecting these courses of study renders it of the highest importance that they should be rendered as complete as possible.

The needs of the ENGLISH DEPARTMENT have already engaged your serious attention. The large number of students belonging to all of the Colleges, who are required to study the English branches, no less than the character of the work which is to be performed by the instructor, renders proper instruction in this department exceedingly laborious. In the important matter of Composition, the labor is something fearful. The very imperfect preparation of students in these branches, in most of the schools, imposes a difficult task upon

the instructors in the English Department, and demands an augmentation of teaching force in this quarter.

And I beg leave to suggest that it is very desirable to establish a separate chair of ASTRONOMY, in connection with the "Physical Observatory" recommended in this Report. It seems to me that Astronomy is too important a branch of knowledge to be made an appendix to the Engineering Chair any longer than is absolutely necessary. Moreover, the duties of the Professor of Engineering, in his *special department*, are sufficient to fully occupy his time.

Finally, an instructor in FREE-HAND DRAWING should be supplied as soon as practicable.

SPECIAL REPORTS.

I beg leave respectfully to call your attention to the following "Special Reports," in relation to the *Five Colleges of Science*, viz.:

APPENDIX A.

- (1.) On Agriculture—By Professor Hilgard.

APPENDIX B.

- (2.) On Applied Mechanics—By Professor Hesse.

APPENDIX C.

- (3.) On Mining—By Doctor Becker.

APPENDIX D.

- (4.) On Engineering—By Professor Soulé.

APPENDIX E.

- (5.) On Chemistry—By Professor Rising.

APPENDIX F.

- (6.) General Matters: Additions to Library, etc.; Additions to Museum, etc; Lick Astronomical Endowment.

These Special Reports will afford more detailed information in regard to the "progress, condition, and wants" of each of these Colleges. All of which is respectfully submitted.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF CALIFORNIA,
TOLAND HALL, SAN FRANCISCO.

ACTIVE MEMBERS OF THE FACULTY.

JOHN LECONTE, M. D.,
President.

H. H. TOLAND, M. D.,
Professor of Principles of Surgery and Clinical Surgery.

R. BEVERLY COLE, M. D.,
Professor of Obstetrics and Diseases of Women and Children.

A. A. O'NEIL, A. M., M. D.,
Professor of Anatomy.

C. M. BATES, M. D.,
Professor of Clinical Medicine.

M. W. FISH, M. D.,
Professor of Physiology.

W. T. BRADBURY, M. D.,
Professor of Materia Medica and Therapeutics.

F. W. HATCH, A. M., M. D.,
Professor of Principles and Practice of Medicine.

W. B. RISING, PH. D.,
Professor of Chemistry.

N. J. MARTINACHE, M. D.,
Professor of Ophthalmology and Otology.

G. A. SHURTLEFF, M. D.,
Professor of Mental Diseases.

THOMAS M. LOGAN, M. D.,
Professor of Hygiene.

E. D. MARTINEAUT, M. D.,
Demonstrator of Anatomy.

A. A. O'NEIL, M. D.,
Dean of the Faculty, Office, 650 Washington Street.

CLINICAL INSTRUCTION.

In connection with the Lectures there have been established a Medical and Surgical Clinic, a Clinic of Diseases of the Eye and Ear, a Clinic of Diseases of Women, and an Obstetrical Clinic at the City and County Hospital, where, throughout the course, diseases in all their varieties and stages may be studied at the bed-side.

A patient is placed in charge of a senior student, and by him examined, a diagnosis and prognosis given, together with his views of treatment, in the presence of the class; after which all errors of investigation, conclusion, or suggestion in treatment are corrected, with such remarks upon the subject as may be pertinent to practical medicine, etc.

Every student thus detailed is expected to keep a complete history of the case, in due form, for his own and lecturer's use.

Thus it will be seen that the extraordinary opportunities furnished are scarcely to be equaled by any school in the Union, and certainly are excelled by none.

Clinical Lectures will be given on Monday, Wednesday, and Friday of each week, on Practice of Medicine, Surgery, Special Pathological Anatomy, Physical Diagnosis, Auscultation and Percussion, Diseases of Women, and Diseases of the Eye and Ear, at the College.

The Surgical Clinic will be under the direction of Professor Toland.

The Medical Clinic under Professor Bates.

The Obstetrical Clinic and the Clinic of Diseases of Women under Professor Cole.

The Clinic of Diseases of the Eye and Ear under Professor Martyn.

The Faculty invite attention to the fact that the Board of Regents have established a Chair of Mental Diseases and Medical Jurisprudence.

The increasing ratio of insanity to population is attracting the attention of the entire medical profession. The leading schools of the world are establishing special courses of instruction in this department; hence, the Faculty, in view of the frequency with which these diseases are met, and the many casualties, injuries, and deaths from violence and cases of poisoning occurring in this State, involving medico-legal investigation, feel especial pride in being able to announce the addition of this Chair to their curriculum.

The same authorities have established a Chair of Hygiene, which will be illustrated by the Professor with new apparatus recently obtained by him for this Chair.

THE MUSEUM

Of the College has recently received large accessions to its collection of wet and dried preparations, in the various departments, together with extensive additions in wax and *papier mache*, fitted for illustrating the lectures. Professor Cole, lately returned from Europe, has secured for the other Chairs, as well as for his own, every improvement necessary or useful for explanation.

SPECIAL BRANCHES OF STUDY.

The following branches are annually taught: Principles and Practice of Medicine, Anatomy, Physiology, Surgery, Chemistry, Materia Medica, Clinical Surgery, Clinical Medicine, Pathology, Midwifery, Diseases of Women and Children, Medical Jurisprudence, Clinical Diseases of Women, Clinical Midwifery, Ophthalmology, Otology, and Hygiene.

PRINCIPLES AND PRACTICES OF MEDICINE.

It will be the aim of the Lecturer in this department to impart to the student the most important practical knowledge, to present in his lectures a summary of those facts and principles which are embraced in the practice of medicine at the present time, and which furnish the only safe guide to the medical man.

He will endeavor to give a faithful description of diseases, their etiology, symptoms, diagnosis, prognosis, lesions, and treatment.

He will convey to the student a knowledge of the pathological changes which occur in different diseases, by means of plates, various preparations, and by recent specimens of diseased parts. A medical clinic will also be given at the City and County Hospital, where the student will have an opportunity of testing, by the evidence of his senses, those facts and principles which have been taught in the lecture room. Every effort will be made to impart practical instruction in the diagnosis and treatment of diseases.

Especial attention will be given to the diagnosis of diseases of the chest, by auscultation and percussion.

CHEMISTRY.

No effort will be wanting to make the course upon this important branch of science as thoroughly practical and instructive to the class as in similar institutions in the Atlantic States.

All important principles in Chemistry will be illustrated by means of suitable philosophical, chemical, and other apparatus for that purpose, and facts and theories will be presented in a clear and comprehensive manner.

Toxicology will receive that careful attention which its medico-legal importance demands.

PHYSIOLOGY.

The lectures in this department will embrace a consideration of both general and special Physiology, including all that has been developed through the microscope up to the present time, and will be illustrated by the largest and most complete series of colored drawings in the United States, prepared expressly for these lectures.

These drawings have been furnished, and are designed to convey to the mind of the student ideas which it is impossible to communicate by language alone.

When expedient, the microscope, an instrument to which the science of Physiology is much indebted, will be used for illustrating important facts and principles, and the student will not only receive instruction in theory, but in the means of arriving at facts in this important science.

ANATOMY.

The lectures on Anatomy will be fully illustrated by preparations (wet and dry) and by the *cadaver*.

The dissecting-room has been entirely refitted and furnished with every possible convenience, so as to facilitate the prosecution of the study of practical Anatomy, and will be constantly supplied with an abundance of material.

SURGERY.

Instruction in this department will embrace:

First—A regular course of lectures on the principles and practice of surgery.

Second—Demonstrative Surgery upon the *cadaver*; and

Third—A thorough clinical course, including diseases of the genito-urinary apparatus, at the County Hospital and College Building.

OBSTETRICS.

In this course there will be no lack of effort to bring everything pertaining to this department as clearly and practically before the mind of the student as the present state of the science will admit.

The lectures will be amply illustrated by colored drawings, many of which have been taken from nature, and also by wet preparations. The different operations in obstetrics will be performed upon a manikin, and the student will be instructed and practiced in the use of obstetrical instruments, besides enjoying the opportunity of visiting the Lying-in Hospital, and applying to practice principles which have been taught in the lecture room.

MATERIA MEDICA AND PHARMACY.

It will be the aim of the Professor of Materia Medica to bring before the class all that is of importance and bears the impress of truth, connected with this department, in such a manner as to be readily comprehended by the student.

The lectures will be illustrated by colored drawings, by the exhibition of the various medicinal substances in use at the time of describing them, and by demonstrating their reactions and combinations.

Recent plants will be presented and described, when expedient, particularly those which are indigenous to our soil, of which there are many varieties scattered over this vast region, possessing great therapeutic value, a knowledge of which is indispensable to the practitioner of medicine in this country.

DISEASES OF WOMEN.

This department, which has made within the past few years such rapid strides toward thorough development, and which has recently received so much attention at the hands of the profession, will be fully taught, both didactically and clinically. The facilities furnished in this institution for carrying out practically the study of diseases peculiar to women are rarely enjoyed, and are not excelled by any other school in the country.

MEDICAL JURISPRUDENCE AND MENTAL DISEASES.

The lectures in this department will exhibit the principles of legal medicine and the duties of medical men as experts in giving testimony in courts of justice, and in the examination of medico-legal questions; will embrace a view of insanity, suicide, infanticide, legitimacy, poisoning, death and injury from violence, feigned sickness, duties of coroners, and other topics of practical importance, whether

to the student of medicine or of law; together with a thorough course on the various diseases of the mind, so common in this State.

OPHTHALMOLOGY AND OTOTOLOGY.

The great and growing importance of Diseases of the Eye and Ear, and the extensive discoveries and improvements recently made in those departments, have led to the establishment of a Professorship of Ophthalmology and Otology. The students will have frequent opportunities of witnessing operations of different kinds, particularly on the Eye, and will be instructed in the use of the ophthalmoscope and other instruments, in the diagnosis and treatment of the diseases of these organs. For this purpose a proper room has been specially furnished and fitted, and the student will be taught their use practically.

Students in good standing will be permitted to attend the lectures of the Pharmaceutical Department on payment of the matriculation fee of two dollars and a half (\$2 50).

REQUIREMENTS AND REGULATIONS.

The examinations will be so arranged as to permit the commencement for conferring degrees to be held early in November.

The candidate must be of good moral character, and at least twenty-one years of age.

He must have attended two full courses of lectures in some regular and recognized medical school, one of which shall have been in this College, and he must exhibit his tickets, or other sufficient evidences thereof, to the Dean of the Faculty.

He must have studied medicine for not less than three years, and have attended at least one course of practical anatomy in the dissecting-room, and one course of clinical instruction in an institution approved by the Faculty.

He must present to the Dean of the Faculty a thesis or dissertation upon some medical subject, in his own hand-writing and of his own composition; and exhibit to the Faculty, at his examination, satisfactory evidence of his professional attainments.

FEEES.

The aggregate fees for tickets to all the lectures during the regular term, including instruction at the various hospitals, will be one hundred and thirty dollars. Tickets for one or any number of the departments of instruction may be had separately.

BENEFICIARIES.

For the purpose of assisting meritorious young men, the Faculty will receive annually a limited number of beneficiaries, who will be required to pay *fifty dollars* each toward the support of the Institution, together with the matriculation fee.

Those who are desirous of availing themselves of this foundation must present to the Dean of the Faculty, as early as possible, satisfactory evidence, showing them to be of good moral character and of appropriate elementary education, and so circumstanced as to *require* this assistance.

SPRING, OR PRELIMINARY COURSE.

The Faculty, with a view to increasing the facilities for medical instruction, without additional cost to the student, will deliver

annually a gratuitous preliminary course of lectures upon subjects of importance, commencing on the first of February, and continuing till the commencement of the regular course. Attendance upon this course is particularly desirable, inasmuch as the topics treated of will be such as it will be impossible to reach in the regular course, and hence will enable the Professors to treat exhaustively their respective subjects.

BOOKS OF REFERENCE.

Anatomy—Gray's Anatomy and Wilson's Anatomy.

Physiology—Dalton's Physiology, Draper's Human Physiology, Flint's Physiology.

Chemistry—Fowne's Chemistry, by Bridges.

Materia Medica—H. C. Wood's Therapeutics, Materia Medica, and Toxicology, Biddle's Materia Medica, Stille's Materia Medica, Stille's Therapeutics, and United States Dispensatory.

Surgery—Erichsen's Science and Art of Surgery, Gross' System of Surgery, H. H. Smith's Operative Surgery.

Principles and Practice of Medicine—Flint's Practice of Medicine, Aitken's Practice of Medicine, and Bennett's Practice of Medicine.

Clinical Medicine—Tanner's Clinical Medicine, Da Costa's Medical Diagnosis, and Loomis' Physical Diagnosis.

Obstetrics and Diseases of Women and Children—Bedford's Principles and Practice of Obstetrics, Scanzoni's Diseases of Women, Thomas' Disease of Women, Simm's Uterine Surgery, Simpson's Diseases of Women, and West on Diseases of Children.

Ophthalmology and Otology—Troelsch on the Ear, Wells' Treatise on Diseases of the Eye, and Donder's on Refraction and Accommodation.

Medical Jurisprudence and Mental Diseases—Maudley's Physiology and Pathology of the Brain, Bucknell and Tuke on Insanity, and Taylor's Medical Jurisprudence.

Hygiene—Park's Manual of Practical Hygiene, Hammond's Treatise on Hygiene, Mapother's Lectures on Public Health, and Huxley and Youman's Physiology and Hygiene.

BOARDING.

Students may obtain good Board in San Francisco at from *five to ten* dollars per week, and, if they desire, may live at a less expense.

N. B.—Students, on arriving in the city, should call at once upon the Dean, who will communicate all necessary information. Letters must be addressed to A. A. O'Neil, M. D., Dean of the Faculty. Office, 650 and 652 Washington Street, below Kearny, or at the College, Stockton Street, between Chestnut and Francisco.

Notice.—Pathological and other specimens are respectfully solicited for the College Museum; due credit will be rendered to the donors. Specimens may be left on deposit at the Museum, where proper care will be taken for their preservation.

CALIFORNIA COLLEGE OF PHARMACY.

The *California College of Pharmacy* being affiliated with the *University of California*, forms one of the technical schools contemplated by the framers of the "Organic Act" of the University, each of which is designed to be separate and distinct as regards its peculiar sphere and the work appertaining thereto, but connected by a tie similar to that uniting the States of the Union, occupying in relation to one another distinct and independent positions, yet connected through the general government of the University.

According to the conditions of the agreement, the management of the Department of Pharmacy rests with those best qualified to judge of its requirements, *i. e.*, *practical* pharmacists, to whom, also, is entrusted the responsible task of providing capable and practicable persons as instructors. It will be seen upon reference to the form of agreement, that the position of our school as a College of Pharmacy is maintained in every respect.

Extract from the "Organic Act" of the University of California:

"SECTION 8. The Board of Regents may affiliate with the University, and make an integral part of the same, and incorporate therewith any incorporated College of Medicine, or of Law, or other special course of instruction now existing or which may hereafter be created, upon such terms as to the respective corporations may be deemed expedient; and such college or colleges thus affiliated shall retain the control of their own property, with their own Board of Trustees, and their own Faculties and Presidents of the same, respectively, and the students of those colleges, recommended by the respective Faculties thereof, shall receive from the University the degrees of those colleges; *provided*, however, that the President of the University shall be, *ex officio*, a member of the Faculty of each and every college of the University, and President of such Faculty."

Extract from the "Organic Act" of the University of California:

"SEC. 18. The immediate government and discipline of the several colleges shall be entrusted to their separate Faculties and the Resident Professors of the same, each of which shall have its own organization, regulate the affairs of its own college, etc., etc." * * *

AGREEMENT.

"In accordance with the Organic Act of the University of California, the California College of Pharmacy is hereby affiliated with the University, upon the following basis:

"The College will maintain its own Board of Trustees, and will continue to hold its own property as if this affiliation had not been agreed upon.

"The College will also appoint its own Professors and establish its own course of instruction, subject to the general approbation of the Regents of the University.

"The University will confer the degree of Graduate in Pharmacy upon candidates recommended by the Board of Examiners of the College, and approved by a committee to be designated by the Regents.

"This agreement may be canceled by mutual consent, at any time, or by the withdrawal of either party to it, after twelve months notice to the other party."

CALIFORNIA COLLEGE OF PHARMACY—1877.

INCORPORATED AUGUST 7, 1872.

PRESIDENT,
WILLIAM T. WENZELL.

VICE-PRESIDENT,
C. A. BAILY.

SECRETARY,
EMLEN PAINTER.

TREASURER,
WILLIAM GEARY.

BOARD OF TRUSTEES:

WILLIAM GEARY,	WILLIAM J. BRYAN,
WILLIAM T. WENZELL,	WILLIAM M. SEARBY,
C. A. BAILY.	EMLEN PAINTER.

FACULTY:

President: PROF. JOHN LECONTE, M. D.,
President of the University of California.

WILLIAM T. WENZELL,
Professor of Chemistry.

W. M. SEARBY,
Professor of Materia Medica.

EMLEN PAINTER,
Professor of Pharmacy.

HERMANN BEHR, M. D.,
Professor of Botany.

SCHOOL OF PHARMACY.

[CIRCULAR.]

The Trustees of the *California College of Pharmacy* desire to call the attention of all persons engaged in the drug business on the Pacific Coast to the following announcement of the lecture-course for the approaching session.

In no other part of the United States is there such need of the advantages which this College supplies. The long hours of business prevalent here, the frequent changes in the management of our various establishments, combined with other causes well known to every apothecary, render it difficult for employers to give systematic instruction to their assistants and apprentices in the various branches of science with which they ought to be familiar. This instruction the College provides, and the Trustees hope that employers will afford their assistants the requisite time to attend the lectures, as well as a short time every day for study.

The Trustees would also urge young men who may have entered the drug business without a liberal education, to lose no time in making up this deficiency. In addition to a good English education, they should at least know enough of Latin to enable them to read prescriptions and pharmacopœias with readiness and accuracy.

TEXT-BOOKS: United States Dispensatory and United States Pharmacopœia; Barker's Chemistry; Roscoe's Chemistry; Fownes' Chemistry; Pereira's *Materia Medica*, edited by Redwood and Bentley; Parrish's Pharmacy; Gray's Botany.

THE LECTURES

Will be delivered in the Hall of the Academy of Sciences, corner of Dupont and California Streets, on Tuesday and Friday evenings, commencing March thirteenth, and terminating about the middle of September. In order that the students may derive the fullest benefit from the lectures, they should be present at the opening of the session.

CHEMISTRY.

The lectures will be delivered on Friday of each week, at half-past seven in the evening.

This course will present a systematic study of theoretical chemistry, according to the latest views of chemical philosophers.

Physics will be dwelt upon sufficiently for the illustration of the general properties of matter—the forces of gravitation, adhesion, and cohesion.

Caloric, in its relation to chemistry, will be treated of.

This will be followed by the laws of chemical affinity, the electrochemical theory, symbols, nomenclature, and the laws of chemical combination.

A full and concise course of the chemistry of the non-metallic and metallic bodies is next taken up, comprising the more important elements, and those of special interest to the pharmaceu-
tical student.

The course to conclude with organic chemistry, in which the chemistry of the alcohols, ethers, organic acids, sugars, glucose, gums, starch, glucosides, alkaloids, etc., will receive their due share of attention.

MATERIA MEDICA.

The lectures will be delivered on Tuesday of each week, at half-past eight in the evening.

The lectures on *Materia Medica* are devoted to those substances, chiefly of vegetable origin, which are used in medicine, and which are included under the general designation of *drugs*.

These articles are treated of in a systematic manner, notice being taken of the sources from which they are derived, their natural and commercial history, principal constituents, and remedial qualities. The ordinary and toxic doses, with antidotes to the latter, receive careful consideration.

The students are instructed as to the proper time for collecting the various vegetable products, as well as the best modes of preserving them. Attention is called to their physical properties as met with in trade, and to the leading characteristics of each drug. Substitutions, adulterations, and natural impurities, with the methods of detecting the same, are duly considered, as also the distinguishing features observed in articles of superior and inferior quality.

PHARMACY.

The lectures will be delivered on Tuesday of each week, at half-past seven in the evening.

The introductory lectures to this course embrace the art of weighing and measuring; definition of the systems of weights and measures in use, and authorized by the United States, British, French, and German Pharmacopœias; the theory and practice of obtaining the specific gravity of liquids and solids. A description of the apparatus necessary to the proper conduct of the business of the Pharmacist, and the purposes to which they are applied—such as comminution, solution, filtration, neutralization, precipitation, crystallization, and the management of heat in its application to the processes of evaporation, distillation, sublimation, calcination, etc., will be embraced in the regular course, in which the preparation and products, official in the United States and other Pharmacopœias, together with such non-official preparations as may merit attention, will be considered.

The classification adopted is based upon the most prominent proximate constituents contained in the drug under consideration, commencing with those substances containing prominently lignin, and passing to those containing starches, gums, sugars, volatile oils, resins, organic acids, alkaloids, glucosides, neutral principles, fixed oils, etc.

It being impossible to consider each individual process minutely, it will be the chief aim to thoroughly elucidate those processes that are types of others; referring to the typical process whenever it can be done without depriving the student of valuable information, and drawing attention to any peculiarity or reason for modifying, or deviating from the type.

By this method of instruction it is believed the student will acquire a comprehensive knowledge of his profession, and will read-

ily find similarity between substances that are, physically, entirely different. Manufacturing and Extemporaneous Pharmacy will receive its full share of attention; and those processes that can be conveniently carried out by the Pharmacist, will be minutely dwelt upon. The adulterations and sophistications, to which the official preparations are subject, and the methods of their detection, will be noticed to the extent their importance may demand.

BOTANY.

The lectures will be delivered on Friday of each week, at half-past seven in the evening.

The lectures include structural, functional, and systematic botany, and geography of plants. Excursions are made into the country on alternate weeks during the session, for the purpose of collecting and studying indigenous plants, under the direction of the Professor, and on the day next succeeding the excursion, a lecture will be given in the Hall of Academy of Sciences at one o'clock in the afternoon.

CONDITIONS OF GRADUATION.

1. The candidate must be of good moral character, and have attained the age of twenty-one years.

2. He must have attended two full courses of the lectures given by this College, or one of those given by some other College of Pharmacy whose conditions of graduation are based upon the like term of service, and the final course in this College.

3. Written evidence of the four years service required by the Constitution, must be deposited with the Secretary of the College upon applying for examination.

NOTE.—Any student who has not had the full four years service here referred to, but who has complied with all the other conditions of graduation, may present himself for examination, and, should he receive the requisite number of credits, will be awarded a "Certificate of Proficiency," upon which he will afterwards be entitled to a Diploma on producing evidence of having completed the four years practical experience.

4. He shall at the same time deposit with the same officer an original dissertation upon some article of the *Materia Medica*, some Pharmaceutical process, or the details of an analysis of some chemical substance, which must have been performed by himself. This manuscript must be in his own handwriting, and be executed in a neat and legible manner.

5. He must be recommended jointly by the Professors and the Examining Board.

6. Such recommendation must be approved by the Board of Trustees.

7. Examinations shall only take place at the close of each course.

FEES.

Lecture ticket (for the season).....	\$50 00
Matriculation tickets (paid only once)	2 50
Diploma fee.....	10 00

The matriculation and lecture tickets must be obtained of the Secretary at the beginning of the session.

Members and graduates of the College, and students who have attended two sessions in the College, are admitted free to the lectures.

Medical students, or others not intending to pursue pharmacy as their vocation, will be admitted to the lectures, or any one of the courses they may desire to attend, by paying the matriculation fee, and that of the Chair or Chairs of Instruction, and such students will

enjoy the same advantages as regular students of pharmacy, except that they will not be eligible to the degree of Graduate in Pharmacy.

CLERKS AND STUDENTS.

Drug clerks and students, on coming to the city, and those out of employment here, who are desirous of obtaining situations, may call upon the Secretary and register their names.

Young men coming to the city to attend lectures should bear in mind that they cannot expect to receive much compensation whilst attending lectures and learning the business.

Pharmacists in want of assistants are informed that they can consult the list of applicants for situations, and are requested to notify the Secretary when vacancies occur in their establishments.

Any further information may be obtained by addressing

EMLEN PAINTER,
Secretary California College of Pharmacy,
Southeast corner Clay and Kearny Streets, San Francisco.

CLASS OF EIGHTEEN HUNDRED AND SEVENTY-SIX.

Name.	Nativity.	Preceptor.
Bauer, F. C.	San Francisco	J. A. Bauer.
Blake, Chs. M.	Brewer, Maine	Medical student.
Bradbury, G. T.	Laporte, Indiana	Medical student.
Chard, George R.	Philadelphia	Leon de Nola.
Covey, George T.	Sacramento	Redington & Co.
Connolly, J. J.	Cork, Ireland	Medical student.
Curran, Mrs. M. K.	Tennessee	Medical student.
Curragh, John M.	Cincinnati	J. J. McDonnell.
Dagen, Samuel A.	Columbus, Ohio	H. Bowman.
Eccles, William C.	New York	W. M. Searby.
Evans, Thomas A.	Bristol, England	A. Evans
Guillemand, A. J.	Paris, France	Medical student.
Goldman, B.	Bavaria	
Harris, Henry R.	Santa Clara	J. W. Angell.
Harris, F. W.	New York	Medical student.
Howell, Joseph W.	New York	Charles Langley & Co.
Hutchinson, Chs. S.	Peabody, Mass.	Coffin & Mayhew.
Mervy, Emile C.	San Francisco	A. Mervy.
Minor, George W.	New York	W. J. Bryan.
Minor, John F.	New York	Medical student.
Mitchell, Frank D.	Addison, New York	H. H. Judson.
Mullen, James W.	Waltham	Redington & Co.
Nagle, H. P.	Dublin, Ireland	Medical student.
Owen, Frank D.	San Francisco	N. A. Cody.
Palmer, S. A.	Erie County, New York	A. L. Langfeld.
Parker, Edward S.	Chicago	Painter & Calvert.
Pontius, Frank A.	Waukegan, Illinois	J. G. Steele.
Ralph, James D.	Hannibal, Missouri	
Ray, Frederick E.	Sacramento	A. M. Kurtz.
Rogers, Nathan	San Francisco	W. T. Wenzell.
Selzer, Edward	Germany	
Semler, P. E. A.	Holstein, Germany	Boericke & Tafel.
Sommer, Adolph	Garlow, Germany	F. H. Von der Lieth.
Tabor, Francis	Vermont	Charles Langley & Co.
Tibbits, L. C.	Pittsburg	J. R. Gates.
Zemansky, J. H.	New York	William Koeller.

LIST OF GRADUATES.

EIGHTEEN HUNDRED AND SEVENTY-FOUR.

J. P. Heany Thesis: "Oreodaphne Californica."

EIGHTEEN HUNDRED AND SEVENTY-FIVE.

Robert C. Meyers "Sesame Oil and its Uses."
 Thomas D. Graham "Oxytropis Campestris."
 Gaston E. Bacon "Various Analyses of Tincture of Opium."
 Adolph J. Kahn "Pharmaceutical Education."
 F. P. McLean "Analysis of Magnesites."

EIGHTEEN HUNDRED AND SEVENTY-SIX.

Nathan Rogers "Sium Latifolium."
 Frederick E. Ray "California Opium."
 Henry R. Harris "Hydrocyanic Acid."

MEMBERS

OF

THE SAN FRANCISCO BOARD OF PHARMACY.

JOHN CALVERT, President. WM. T. WENZELL, Secretary.

MAX. TSCHIRNER. JAS. H. WIDBER.

F. A. COLMAN.

AN ACT

TO AMEND AN ACT ENTITLED AN ACT TO REGULATE THE PRACTICE OF PHARMACY IN THE CITY AND COUNTY OF SAN FRANCISCO, PASSED MARCH TWENTY-EIGHTH, A. D. EIGHTEEN HUNDRED AND SEVENTY-TWO.

[Passed by the State Legislature of 1876,]

The People of the State of California, represented in Senate and Assembly, do enact as follows :

SECTION 1. From and after the first day of June, A. D. eighteen hundred and seventy-six, it shall be unlawful for any person within the City and County of San Francisco to open or conduct any pharmacy or store for retailing, dispensing, or compounding medicines or poisons, unless such person be a registered pharmacist, within the meaning of this Act; and it shall be unlawful for any person within the City and County of San Francisco to compound and sell at retail any medicines or poisons, or to compound or dispense any physician's prescription, unless such person be a registered pharmacist or a registered assistant pharmacist, within the meaning of this Act, except as hereinafter provided.

SEC. 2. Any person, in order to be a registered pharmacist, must be a graduate in pharmacy, a licentiate in pharmacy, or a practicing pharmacist.

SEC. 3. Graduates in pharmacy are persons who have had four years experience in stores where prescriptions of medical practitioners are compounded, and each must have obtained a diploma from a college of pharmacy within the United States, or from an authorized foreign institution, or Examining Board. Licentiates in pharmacy are persons who have had four years experience in stores where prescriptions of medical practitioners are compounded, and shall have passed an examination before the Board of Pharmacy; or pharmacists who shall present satisfactory credentials or certificates of their attainments to the Board of Pharmacy. Practicing pharmacists are such persons only who, at or prior to the passage of this Act, have kept and continue to keep pharmacies in the City and County of San Francisco, for compounding and dispensing the prescriptions of medical practitioners, and for the sale of medicines and poisons. Registered assistants in pharmacy are persons of not less than eighteen years of age, who are employed by registered pharmacists, and have studied the art of pharmacy for three years, and have furnished satisfactory evidence of the same to the Board of Pharmacy, and have been registered as assistant pharmacists as hereinafter provided.

SEC. 4. The members of the California Pharmaceutical Society residing in San Francisco shall, during the month of May, eighteen hundred and seventy-two, and every third year thereafter, during the month of May, elect five of the most competent pharmacists of San Francisco to serve as a Board of Pharmacy. The members of this Board shall, within thirty days after their appointment, individually take and subscribe before the County Clerk, an oath faithfully and impartially to discharge the duties prescribed by this Act. They shall hold office for the term of three years, and until their successors are appointed and qualified; and in each case of vacancy the said Board of Examiners shall elect from three nominees selected at a meeting of the said society. The Board shall organize for the transaction of business in the City of San Francisco, by the election, for the whole term, of President and Secretary. Three members of the Board shall constitute a quorum. They shall meet at least quarterly, and have power to make by-laws for the proper fulfillment of their duties. The duties of this Board shall be to transact all business pertaining to the legal regulations of the practice of pharmacy and the retailing of poisons, and to examine and register as pharmacists, or assistant pharmacists, all applicants whom it shall deem qualified to be such, respectively. All persons applying for examination shall pay to the Secretary a fee of five dollars; and on passing the examination shall be furnished with a certificate signed by the President and Examiners.

SEC. 5. It shall be the duty of the Secretary to keep a book of registration open at some convenient place, of which due notice shall be given through the public press, in which shall be entered, under the supervision of the Board, the names, titles, qualifications, and places of business of all persons coming under the provisions of this Act: and it shall be the duties of all such persons to appear before the Board or its Secretary, within a period of thirty days after its organization, and be registered. The fee for the first registration of graduates, licentiates, and practicing pharmacists, shall be two dollars; for assistants, one dollar. It shall be the duty of every person registered to have his registration renewed every year, in the month of January, the fee for which shall be one dollar; and upon changing his place of business or engagement, to notify the Secretary within thirty days. The Secretary shall make all necessary alterations in the register, and notify all persons, on or before the tenth day of February, who shall not have renewed their registration, for which notification the Secretary shall receive a fee of fifty cents; and in case no answer is received within fourteen days, such name shall be erased unless an excuse satisfactory to the Board be presented; *provided, always*, that the said name shall be restored on payment of fifty dollars to the Secretary of the Board within one year. The Secretary shall give receipts for all moneys recived by him, and pay said moneys to the Treasurer of the California Pharmaceutical Society, taking his receipt therefor. The salary of the Board of

Pharmacy and of the Secretary shall be fixed by the Board of Directors of the California Pharmaceutical Society, to be paid out of the registration fees and fines.

SEC. 6. From and after the first day of June, eighteen hundred and seventy-six, every registered pharmacist who shall knowingly, intentionally, and fraudulently adulterate, or cause to be adulterated, any drugs, chemicals, or medicinal preparation, shall be held guilty of a misdemeanor, and on conviction shall be fined fifty dollars in the first, one hundred dollars in the second, and on conviction in the third case, his name shall be erased from the register.

SEC. 7. *And be it further enacted*, That on and after the first day of June, eighteen hundred and seventy-six, it shall be unlawful for any person in the City and County of San Francisco to retail any poisons enumerated in Schedules "A" and "B," appended to this Act, without distinctly labeling the bottle, box, vessel, or paper, and wrapper or cover in which said poison is contained, with the name of the article, and the word "Poison," and the name and place of business of the seller. Nor shall it be lawful for any person to sell or deliver any poison enumerated in Schedules "A" and "B" to any person, unless, on due inquiry, it is found that the person is aware of its poisonous character; and that it is to be used for a legitimate purpose. Nor shall it be lawful for any person to sell or deliver any poison included in Schedule "A," without, before delivering to the buyer, making, or causing to be made, an entry in a book kept for that purpose only, stating the date of sale, the name and address of the purchaser, the name and quantity of the poison sold, the purpose for which it is stated by the purchaser to be required, and the name of the dispenser; said book to be always open for inspection by the proper authorities, and to be preserved for at least five years. The provisions of this section shall not apply to the dispensing of poisons (in not unusual doses or quantities) upon the prescriptions of practitioners of medicine.

SEC. 8. Any person who shall attempt to procure registration for himself or for any other person, under this Act, by making, or causing to be made, any false representations, shall be deemed guilty of a misdemeanor, and shall, upon conviction thereof, be fined in a sum not exceeding five hundred dollars. Any registered pharmacist who shall permit the compounding and dispensing of prescriptions of medical practitioners in his store by persons not registered, except by junior assistants under the direct supervision of registered persons; or any person not registered who shall retail or dispense medicines or poisons, except in a pharmacy, under the supervision of a registered pharmacist or a registered assistant pharmacist, or who shall fraudulently represent himself to be registered, and any registered person who shall fail to comply with the regulations of this Act, in regard to the retailing and dispensing of poisons, shall, for every such offense, be deemed guilty of a misdemeanor, and on conviction thereof be fined not exceeding five hundred dollars.

SEC. 9. One-half of all fines imposed for violations of this Act shall be paid to the Secretary of said Board, and it shall be the duty of said Secretary, after paying all the necessary expenses of said Board, to pay over any surplus money to the Treasurer of the California Pharmaceutical Society.

SEC. 10. All persons registered under this Act shall be exempt and free from all jury duty in the City and County of San Francisco.

SEC. 11. All Acts and parts of Acts in conflict with the provisions of this Act, in so far as they so conflict, are hereby repealed.

SCHEDULE A.

Arsenic and its preparations, corrosive sublimate, white precipitate, red precipitate, biniodide of mercury, cyanide of potassium, hydrocyanic acid, strychnia, and all other poisonous vegetable alkaloids and other salts; essential oil of bitter almonds; opium and its preparations, except paregoric and other preparations of opium containing less than two grains to the ounce.

SCHEDULE B.

Aconite, belladonna, colchicum, conium nux vomica, henbane, savin, ergot, cotton root, cantharides, digitalis, and their pharmaceutical preparations; croton oil; chloroform, chloral hydrate, sulphate of zinc, sugar of lead, mineral acids, carbolic acid, and oxalic acid.

APPENDIX A.

REPORT OF PROFESSOR E. W. HILGARD

TO THE

PRESIDENT OF THE UNIVERSITY.

To the President of the University:

I herewith respectfully submit a report of the operations of instruction in my department, as well as of its wants, and of the laboratory and experimental work of the past two seasons.

In conformity with the resolution of the faculty transferring to my department the whole subject of botany (structural as well as economic), I have given instruction in these branches to the Sophomore Class of the Scientific Colleges during the past two terms. With so numerous a class (over fifty at the beginning of the session) it was impracticable to make any extensive use of the botanical collections in demonstration. It thus became necessary to increase largely the collection of diagrams transferred to me by Professor Joseph LeConte, or to resort to some other means of demonstration suitable for large classes. On account of the rapidity and cheapness with which slides adapted to the magic lantern may be drawn on glass, and their convenience for class-work, I adopted the latter mode, being aided therein by the kindness of Dr. Joseph LeConte, who allowed me the use of half the time of an assistant for this purpose. About four hundred plates, embracing over a thousand figures from various works, have thus, during the session, been drawn for my use by Mr. E. A. Rix. Even this is, of course, but an inadequate substitute for the use of botanical specimens; but by the continued courtesy of Dr. LeConte, I hope during the coming session to increase the means of demonstration on the screen to a satisfactory degree. The most pressing need of this course, however, as well as of the succeeding two years of the agricultural course, is a *garden of general and economic botany on the University grounds*. No picture, however perfect, can, for purposes of instruction, replace the object itself; and while such figures will always be a needful means of demonstrating details of structure to large classes, so that they may know what to look for in the specimen itself, the latter alone is capable of producing that lasting impression, on the mind of the student, which distinguishes actual knowledge from mere effort of memory.

I think I have not been disappointed in the hope that an objective course of this character would tend to increase the interest of stu-

dents in agricultural pursuits, with which the study is so intimately connected. Many members of other colleges have expressed their lively interest in this course, and their strong desire to continue the same if compatible with other duties. By and by, I trust the ranks of the agricultural course proper will thus be better filled.

No juniors or third year students presented themselves for the agricultural course during the past session. Consequently, there will be no senior students during the coming session, and, therefore, no graduates of this college a year hence.

The senior class, during the past session, consisted of two students, of whom one was in the regular course, and has just graduated; the other being a student at large. Their course having been begun before instruction in economic botany was given in the sophomore year, has not been as complete as will be the case hereafter, when agricultural chemistry will be completed in the third year, and the senior year will be occupied in the study of special cultures, agricultural implements and operations, horticulture, stock breeding, dairying, and the principles of husbandry.

I call attention to the fact that whenever the course in these latter subjects comes in order, as will doubtless be the case a year hence, it will be impossible for me to undertake the instruction of the three classes in all the various subjects embraced in the course. As the subjects of the senior year are largely such as should be taught with reference to the local practice of California, it might be practicable to engage lecturers on these topics, specially qualified in certain specialties; since it would be difficult to find one person fully grounded in all. Although this question does not now press upon us, it would be well to look ahead, so as to be sure of securing suitable persons when the time comes.

I think that the agricultural course, as now arranged, is as complete, and will be as satisfactory, as it is possible to make it within the limited space of four years, so long as the students come to us without the least preparation in the natural sciences. That such preparation should be begun at an early age, in the public schools, and would advantageously replace, at that time, some of the more abstract studies now enforced altogether too soon upon the children's minds, has long been my conviction. And I believe such a change would go far towards remedying the growing tendency of our youth to abandon the country for the city. So long as they see in a farmer's life only the daily drudgery, without the cheerful background afforded to educated minds by the contact with nature, and the intellectual food so abundantly presented in the correct application of the principles governing the very complex profession of the truly rational farmer: so long will they continue in the vain attempt to find in our overcrowded cities a more satisfactory existence; as a result of the same tendency, which, at a later period of life, so frequently recalls them to the country. Unfortunately they have then usually lost so much of the habits of body and mind needful to success in agricultural pursuits, that years of life, and a large portion of such capital as they may bring with them, are often lost before the re-adjustment takes place.

It is my conviction that in this tendency to escape from what is supposed to be an unvarying round of drudgery, unrelieved by social enjoyment, save at rare intervals, we have one of the chief causes of the evil which, while it drains the country of the more ambitious of

its population, adds continually to the difficulty of finding lucrative employment for the youth of the cities. And if this view is correct, then it is clear that the remedy lies in the *elevation of the farmer's pursuit to its true dignity* of a learned profession, second to none in the complexity and difficulty of the problems with which it deals, and superior to many in its fundamental importance, as well as in the rational enjoyment of life which it affords to those who understand the principles that underlie its practice, and can apply them understandingly and successfully.

I venture upon this discussion, in this place, because of the gravity of the social problem involved, and its intimate bearing upon the vexed question why so few students, anywhere in the United States, choose the agricultural course presented for their choice in so many institutions. It is well known that this fact is made the basis of severe reproach to the colleges in many cases, it being charged that the cause is to be sought in the nature of the courses; that they are not sufficiently practical, or too severe in their requirements for the generality of farmers' sons. In some institutions this has led, for a time, to a great lowering of the standard of admission and studies, and the introduction of a much larger amount of manual exercise than can in any way be made conducive to instruction. And in some cases this arrangement has been attended with considerable success so far as *numbers* are concerned, for students like to go, and too many parents like to send their sons, where they can easily attain the desired diploma. But a careful observation of the results of this kind of education, for many years, has failed to convince me that it is what is really wanted, and that it redounds to the greatest good of the greatest number. The usefulness of such schools is not, assuredly, to be gauged by the number of farmers they may send back to the country, but by the general resulting advancement in the quality of the farming done in the States where they have been exerting their influence. Judged by this test, some of the institutions adopting the above policy, and usually quoted as triumphantly proving its success, are shown to have remained without any general influence on the improvement of agriculture, though sustained by a public sentiment seeking the realization of a pet theory. In other cases, the failure of patronage, after a most favorable beginning, has gradually led to the modification of the low-grade and manual-labor policy, until finally the level of the technical schools in other professions has, I think, been shown to be also that best adapted to the advancement of agriculture. *A priori*, no good cause can be shown why agriculture should, in this respect, differ from other pursuits involving a broad knowledge of principles. *A posteriori*, a fair discussion of the experience had, both in this country and in Europe, leads to the same result.

I come, then, to the following conclusions, upon which I base the recommendations hereinafter made:

1. A lowering of the requirements for admission to the agricultural course, or of the grade of studies pursued therein, while it might lead to a momentary increase of numbers, is unadvisable, and would lead to accomplish the results contemplated by the "Morrill Bill."

2. Foremost among the measures needed to forestall and obviate the flight of the rural population from the country to the city, is the introduction into the lower schools, of studies bearing upon the pur-

suit of agriculture, and investing it with an intellectual interest, the same that, in later life, attracts so many who have achieved financial success from the city to the country.

3. A knowledge of facts and principles, and not the achievement of manual dexterity, must be the leading object of a truly useful course of instruction in agriculture.

4. The inculcation and full understanding of these principles must be assisted, to the utmost extent possible, by their actual application by, or under the eyes of, the student. In other words, the kindergarten system, or object teaching, should be made the preëminent method of instruction in natural, and more especially in technical, science. Manual exercise, in the operations described, should, so far as time and appliances permit, be made the adjunct of the instruction in principles. Beyond this point, viz: the performance of *educational* or *instructive*, and therefore uncompensated labor, manual labor should not be enforced upon the student in agriculture, any more than upon the student of engineering or mining, until the educational part of his course is completed and that of commercial apprenticeship may properly begin.

5. No student in any profession is qualified to practice the same independently, without a previous course of practical training, in some establishment conducted upon a commercial basis. But the commercial principle of lucrativeness is, as a rule, incompatible with instruction in scientific principles; and the attempt to combine the two unavoidably leads to a spurious and unsound practice, which the student must unlearn before he can be commercially successful.

THE PRACTICAL COURSE, OR "APPRENTICESHIP."

Whether or not this indispensable practice, or apprenticeship period, can be best passed through in private establishments, or, as is done to some extent in Russia and other European countries, in public model establishments, is a question depending largely upon local circumstances. In a republic it would seem, at first sight, that the principle confining the functions of government to whatsoever cannot be accomplished by private effort, should guide in this as well as in other questions.

There appear to be special difficulties in the way of a successful system of trade apprenticeship in cities, arising to a great extent from the extended use of machinery in place of manual labor. On the farm, however, the labor-saving machinery can scarcely produce any such obstacle to the acquisition of an intelligent general practice, and farmers always have need of workmen of all degrees of practice and intelligence. I do not, therefore, see any serious or intrinsic obstacle in the way of private apprenticeship on farms. It is certainly there that the truest practice can be gotten. There are grave difficulties in the way of rendering the practice on a model farm anything more than an illustration of the best local practice, unless indeed the commercial principle, that of financial success, be entirely discarded. To do this would, however, be fatal to the primary object to be attained during the "apprenticeship" period of education. It would, therefore, be necessary to have such establishments in the several agricultural regions of a State; and these, in competent hands, would not only serve the purposes of students desiring to take their practical course, but would form most important centers for the

introduction of correct local practice, in the capacity of "experiment stations"—a feature that could readily be combined with the "model" one, provided it be kept financially distinct, and is fully understood by the students to be something outside of any "model" to be copied by them in practice.

"MODEL" AND "EXPERIMENTAL" FARMS.

So much futile discussion and misunderstanding arises from the confusion, both in practice and in theory, of the three essentially different functions that a farm may be made to subserve in connection with agricultural instruction and improvement, that I think it desirable to give here a concise definition of each, viz:

"Model" farms may be of two kinds:

1. To illustrate the *best local practice*, as achieving the greatest financial success compatible with the local circumstances, and with the maintenance of the soil's fertility. This, clearly, is what is wanted for the concluding phase of agricultural education, the practical course, or "apprenticeship" period.

2. A farm may be a *model as regards the kinds of operations, crops, stock*, etc., showing the best of its kind in everything, without any reference to local profitableness, or adaptibility to climate or local circumstances. It is to the student of agriculture what the laboratory and cabinet of minerals, models, etc., are to the mining and metallurgical student. Its object is the illustration and inculcation of facts and principles, and of the details of practice in general.

In the nature of things such an establishment embraces a great variety of objects and appliances, such as no sane man would think of accumulating on his premises for commercial purposes. Like all other appliances for educational purposes, it is an expense—it cannot be lucrative, or even self-sustaining, except at the expense of the students. But it is the true means of *education*, properly so called.

3. The *experimental farm* serves the purpose of *investigation*, with a view to the ascertainment of new facts in the theory or practice of agriculture. In it neither financial success nor instruction can usually be regarded, experimenting being of necessity costly, involving many more failures than successes, in the nature of the case. They are intended, not for the instruction of students, but for the guidance of farmers whenever a practically important fact has been elicited. To a limited degree it can serve for instruction; but there is some danger of imparting to the younger students an unsound taste for experimenting. However useful to general practice, it is not essential for educational purposes.

THE KIND OF FARM WANTED AT THE UNIVERSITY.

For the objects of the University course in agriculture, the second kind of farm above defined is unquestionably the most important. The principles and practice of agriculture should be illustrated to the students in their *general* aspects, and not merely with reference to the local requirements of financial success. Nor do I believe that a farm attempting to combine the features of the first and second, can fail to produce in the student's mind unsound impressions as to what is necessary in actual practice, that it will take time, and often repeated failures, to remove from his mind. Despite all asser-

tions to the contrary, based upon general impressions and the published statistics of some of the Eastern Colleges of Agriculture, I fail to find, either in the personal careers of their pupils or in the general condition of agriculture in the respective States, any facts justifying the sweeping claim of success sometimes put forward by the advocates of the mixed system. It can hardly be seriously contended that the national grant was merely intended to send back to the farm as many moderately good farmers as possible. Since these institutions cannot possibly educate the bulk of the rank and file, they certainly fail to fulfill their mission if they do not send out the leaders of progress in agriculture. It is not by counting up the numbers of pupils, but by considering the aggregate effects upon the advancement of rational agriculture, that the measure of success is to be gauged.

"EDUCATIONAL" VS. "UNINSTRUCTIVE" LABOR.

If we examine critically the registers of the institutions where a certain amount of manual labor, as such, has been prescribed, either by law or custom, we find in consecutive periods a steady tendency to the differentiation of "uninstructive" or mere manual labor, from the "instructive" or educational; and a gradual restriction of the former, as obligatory, to the lower college classes. And in consulting officers of those institutions whose age entitles them to be heard in this question, I find that grave doubts are entertained of the utility of *prescribing* any *merely* manual labor *at all*—that they are puzzled as to how to render it useful to the students, save as a means of earning something, and that the time so employed is felt to be taken from the more serious business of education, at a time when they are not prepared to appreciate the reasons of what they are doing.

As to the alleged necessity of "keeping up the habit of labor" by obligatory uninstructive labor, I am profoundly convinced that it is not by "keeping the pupil's nose to the grindstone" of what he considers mere drudgery, but by rendering that labor intelligent, and thus making it cease to be drudgery, that the apparent repugnance of our youth to farm labor can be overcome. When parents have committed the grave error of failing to impart to their sons habits of industry, and a taste for their future pursuit in life, at home: they cannot reasonably expect that in the limited time during which we, as teachers, can exert our influence upon them, we should be able to overcome the bias created by sixteen years of home life. Nor do I conceive that the policy of a public institution of learning can or should properly be based upon the supposition that it will have to make up for such omissions on the part of parents.

Least of all can I accept the view held by some, that the enforcement of uninstructive manual labor is calculated to render it more honorable in the eyes of students. The snobbishness that attaches any reproach to manual labor, as such, is scarcely worthy of such consideration, in our time and country, as to shape the policy of our educational institutions; and, probably, nowhere is such reform in this direction less called for than at the University of California. But mankind has always held, and doubtless always will hold, that merely mechanical work, such as can be done by animals or machines, is inferior in degree to that which involves the use of

man's special privilege—the reasoning power. It is, therefore, by rendering labor intelligent and skilled, that it secures the highest consideration, both in a social and a pecuniary point of view; and it is but natural that to precisely the same extent it should be more cheerfully and voluntarily undertaken.

It is often and very positively asserted by persons assuming to represent the feelings and wishes of the farmers on this subject, that they are especially anxious to see merely manual labor made a part of the course in the agricultural colleges; and that the failure of the latter to adopt this feature is the main cause of the want of attendance upon the agricultural courses on the part of farmers' sons. The past history of the agricultural schools in the United States fails to sustain this assertion, and twenty years of personal experience of my own, involving constant and intimate relations with both the leaders and the rank and file of the farming population, has left me strongly impressed with the opinion that apart from a comparatively small number of men (very commonly not practical farmers themselves, but having pet theories in that direction), the general desire is *not* for more drill in handicraft, but for more use of brains trained in the branches of knowledge or science related to agriculture. Thus far I have found no reason to believe that the unusually intelligent farming population of California is differently minded; and on this point I take direct issue with those assuming persistently to assert the contrary. The complaint, simultaneously made, that the farmers' influence is not sufficiently felt in the legislative halls, strongly corroborates and tallies with my conviction, that the remedy lies more in the direction of the training of the mind than of that of the hand; and that the sound sense of the industrial population appreciates the fact that the safe-guarding of their interests requires a more thorough education within their own ranks. The mistake too frequently made by them is that, in sending their sons to the University, they look only to education outside of the farmer's pursuits, under the impression that they can be taught enough of farming at home. The result is that these sons, knowing only the practice and nothing of the principles of farming, usually choose some other profession, involving, as they think, less of mere drudgery. This result, however, is clearly attributable to incorrect notions imbibed at home, which no efforts on the part of the teachers can afterwards rectify.

INSUFFICIENCY OF TIME IN THE FOUR YEARS COURSE.

During the recent thorough discussions by the Faculty, of the various courses in the University, with a view to the reduction of the hours of study to the limits indicated by experience, it has become more than ever apparent that it is impossible to compress within the limited space of four years, more than the merest rudiments of a technical education, leaving the student, at the end of his course, still a mere tyro, who will vainly strive, diploma in hand, to grapple with the problems of actual life. The *best* are not more than fairly qualified to enter upon the indispensable "practical course" or apprenticeship period of education. But the possession of the magic parchment encourages them to consider, henceforth, that their education is "finished." Instead of entering, as they should, upon the apprenticeship which would, through their knowl-

edge of principles, quickly lead them to a thorough practical understanding of their profession, they too frequently attempt that independent career which is altogether beyond their strength. Then, failing in practice, as might be anticipated, they become discouraged, and perhaps throw aside altogether their special studies, and enter upon some commercial occupation, deploring, and exhibiting themselves as a lamentable example of, the unpractical tendencies of a college education.

I think the educators in this country, in every sphere, are fast coming to the conclusion that the giving of diplomas at the end of the time-honored period of four years, entered upon with no better preparation than is now given, is an evil needing to be abated at the earliest moment possible. Human nature is still too much the same in all countries, to permit us to achieve in the four years' course, what in Europe is done in eight or ten. The absurdity of attempting to give within those few years, both a *general*, and a *professional* or technical education, is especially glaring, and is assuredly the source of the greater part of the complaints so generally rife, of the unsatisfactoriness of the technical courses of our colleges as compared with those of European institutions. But I contend that it is impossible to remedy these defects, unless a more reasonably adequate amount of time is given by parents and pupils to the business of education. And as regards the technical courses especially, and the agricultural course in particular, I would confer a diploma upon no one who had not complied with the essential condition of a practical course subsequent to his years of college instruction, and could give proof of practical efficiency in his profession. This would, as a rule, require not less than one additional year, during which the student, though perhaps mostly absent from the University, would still continue under the general direction of his former instructors, and would report to, and consult them, regarding his progress in the practical course.

Were this policy adopted, I feel assured we should hear little more of the unpractical tendencies of college instruction. No one whose opinion is worth considering in this question, denies the necessity of the "practical course" or commercial apprenticeship, in any branch of industrial education. But there are some who insist that it should be compressed within the limits of the four years, and made simultaneous with instruction in principles; and it is with this attempt, and with those who undertake to assert its success, contrary, as I believe, to fact and to the teachings of experience, that I take issue in this discussion. So long as more time is not given, I believe the evils complained of cannot possibly be remedied by any system of cramming, or spurious "practice."

ARE THE AGRICULTURAL COLLEGES IN ADVANCE OF THE DEMAND?

There is one other possible cause of the paucity of students in our agricultural colleges, aside from the often asserted unsatisfactoriness of the course. It is that perhaps these institutions are somewhat in advance of the demand for scientific instruction in agriculture—that the agricultural population, as a rule, does not feel the need of such knowledge of principles as is deemed indispensable to success in other vocations, and, therefore, does not seek it for its sons.

It is my conviction that this is not only a true cause, but in reality

the chief one. Where the soil is still unexhausted, and yields abundant returns, under ordinary circumstances, to the rudest systems of tillage and culture compatible with our highly improved implements; where, therefore, success rewards about equally, for the time being, the intelligent and the unintelligent farmer (at least until the latter has exhausted the powers of the soil which the former has retained unimpaired), so long will the bulk of the agricultural population remain under the impression that their sons can learn nothing in the agricultural college that cannot be better learned at home, so far as success in business is concerned. This is the exact remark I have constantly heard from farmers' sons coming to the University, in reply to the question why they did not choose the agricultural course; and it is presumable that they echoed the sentiments of their fathers.

It is clear that these students, and these fathers, look upon agriculture merely in the light of a handicraft, requiring for its successful exercise merely "common sense," but not the luxury of "science." Nor do I differ with them as to the handicraft part being best learned at home. It is certainly not worth while to have, or to attend, *colleges* for that purpose.

This supineness and misunderstanding on the part of farmers correct themselves in course of time, as success gradually becomes more and more dependent upon skill and forethought, and the margin between profit and loss is narrowed. The first effect, as in the New England States, is the abandonment of agriculture, by many, for trade or manufactures; while the remnant of agriculturists, in the fight for existence, become more and more inclined to seek the aid of science, which is, after all, merely the sum of well digested experience. Thus the Massachusetts Agricultural College, the Agricultural Department of Yale, the Connecticut Experiment Station, Cornell, and others, are doing yeoman's service in response to a well defined and thoroughly real want. Nor is the effect of these institutions apparent so much in the brilliant success of their pupils, as in the interest excited by them as leaders of progress, and by the services rendered the present generation of farmers, in the way of advice and experiment regarding practical questions that happen to be of direct interest at the time.

It is, I think, largely in the latter direction that the newer institutions must seek work, for it is in this way that the fathers will become convinced that it is to their and their sons' best interest that not only the *handicraft*, but also the *science* of agriculture should be understood by them.

NECESSITY OF AN AGRICULTURAL SURVEY OF THE STATE.

To this end, as well as in the interest of agriculture generally in this State, I think it of the utmost importance that a systematic and thorough "agricultural survey" of the State be initiated at the earliest possible moment. The object of this work should be, first, to obtain, through systematic field explorations by competent persons, a full and accurate knowledge of the natural features of the State bearing upon agriculture and related industries—the natural subdivisions, their climate, surface configuration, soils, natural and artificial productions, and probable future industrial adaptations, etc. Secondly, and very essentially, to collect directly from the

agricultural population all information afloat, and experience had, in the various sections, regarding the various crops and modes of culture that may be adapted to each. Hand in hand with these investigations in the field should go the examination of the specimens collected, of soils, subsoils, rocks, marls, natural and agricultural products, etc., in the laboratory, in such manner and to such extent as may seem proper and necessary from the indications obtained in the field work. The results of these investigations should be made available to the public by current bulletins or other mode of publication, as the work progresses; and finally the result of the whole, embracing a full, authentic, systematic, intelligible and scientifically accurate account of the industrially important features of the State, written in the plainest language possible, should be published in the form of a handbook of the State, accompanied by a colored map exhibiting to the eye all the more important results. To such a work, conveying the kind of information wanted by every settler, immigrant, farmer, or investor, all could go for authentic and impartial information regarding any portion of the State.

A work of this kind has been carried out in some form, under various names, in most of the older States; in some not only once, but repeatedly, in answer to the popular demand for such information as would enable all to participate in the existing natural advantages, and bring the light of science to bear upon the industrial development of the State. That such demand exists, and is even very lively, in California, is proved by the numerous pamphlet descriptions of particular regions published, usually, by persons interested in their settlement. Such publications, together with newspaper articles, and some other works of the most general character, now form almost all the means of information accessible to the new comer, unless he can afford the expense of a personal visit.

These descriptions, however, even when conscientiously made, and correct as far as they go, must necessarily lack the completeness, accuracy, and authenticity which attaches to government work, executed on a comprehensive plan, and by persons specially selected for their fitness to make observations of this kind. The best intentions, long residence, and a large amount of local experience, cannot make up for the want of proper training in the art of observing and the habit of reasoning logically upon facts, and drawing practically correct conclusions therefrom. The consequence is, that not only are those desiring to immigrate to California from a distance unable to obtain the information needed for an intelligent decision, and selection of their future home and preferable pursuit, but too many of those who have been induced to come by highly colored or exaggerated descriptions of the advantages of particular regions, meet with grievous losses and disappointments.

I hold that the more accurately California is made known, the more will the advantages it offers be appreciated, and the more desirable will be the quality of the immigration drawn to the Pacific Coast. The work I propose is, in my estimation, the most direct and effectual means of accomplishing these desirable ends; and it was largely to such considerations, doubtless, that the liberal provision originally made for the "geological survey" of the State, owed its existence.

If, owing to errors in its management, the geological survey of California has thus far been unsatisfactory to the people of the State,

it is nevertheless certain that the work done is such as needed doing in the end, and that what has been done is well done, and forms the scientific groundwork upon which all accurate investigations made hereafter will be based. Shall all this important material be allowed to lie useless for practical purposes through this generation? I think the necessities of the industrial population of California cry loudly for the practical deductions from the work done, which thus far lie untouched, and which it will now be comparatively easy and inexpensive to elicit. Nor is it only the direct effect on the industries of the State that is needed, but it is equally important that the knowledge thus gained should be available for the instruction of the youth of the State, both in the Public Schools and in the State University. There can be no question that a good knowledge of the features and resources of a State should form part of the elementary instruction required to be given to all. Text-books giving such information, based upon the State surveys, have been introduced into the public schools of several of the older States, and should be in all. If (as I trust will be done) efficient instruction in natural science is made a part of the early course in the public schools, the "Handbook of the State" should be in the hands of both teachers and pupils, to serve as a guide in directing attention to important and interesting local features, and to their correct appreciation. In the University, the detailed knowledge thus obtained of the industrial features of the State, would at once enable us to impart instruction more truly practical; since it will then be possible to tell the student, not only what he should do in certain supposititious cases, but also what, in fact and in practice, will be the circumstances they will have to consider in their own State. I feel assured that in its influence, both upon parents and children, this kind of instruction would be among the most efficient means to fill both the ranks of intelligent farmers, and those of the students in the agricultural and industrial courses.

AGRICULTURAL EXPERIMENT STATIONS.

I cannot refrain from expressing, in this connection, my earnest conviction of the great utility of the establishment of local "experiment stations" in the various agriculturally different regions of the State. The single one now in existence at the University can and should, when supplied with the proper means, conduct all such experiments and investigations as, being of a general or strictly scientific nature, are substantially independent of local conditions and accidents. We can without difficulty examine and report definitely on the nature of soils and products in distant regions of the State, when proper specimens have been supplied. But the suggestions resulting from these investigations must, to be practically available, often be tested experimentally in the localities concerned, under special and perhaps varied conditions, and under the supervision of competent and impartial observers, instructed by the agricultural department at the University as to the precise points to be tested, and the manner of conducting the experiments. Private parties cannot, ordinarily, be expected to charge themselves with such work, which, like all experimenting, must always be more or less costly, and being for the general benefit, should properly be conducted at the common expense of persons interested.

I have heretofore suggested that local agricultural societies, or

granges, might for the present apportion such experiments to those among its members best fitted to conduct them successfully, guaranteeing them against loss, or allotting a reasonable compensation for time and trouble. How far this would be generally practicable and successful, as against the establishment of such stations by the State at large, I am not prepared to say; but I am inclined to think that a subsidy by the State for such purposes, to local societies undertaking such work, under proper guarantees, would here as elsewhere act as a salutary stimulant, without giving rise to a complex system of appointments, liable to many defects and abuses. The local stations, like the central one at the University, should be restricted to such work as would be at least of such general interest as to entitle it to publication in a State report; while work of only personal interest, if undertaken at all, should be made at the expense of the party interested, for the benefit of the Station Fund. I should recommend, in this respect, the adoption of the regulations published by the Connecticut Experiment Station, of which I subjoin a copy, and which are substantially identical with my own practice heretofore, at the Mississippi Agricultural College as well as in this State.

It should be observed that the predominant character of the work to be done necessarily varies, not only in different States, but with the age of each, and according to the condition and peculiarities of their agriculture. It thus happens that in Connecticut and Vermont the analysis of commercial fertilizers, upon which the farmers are largely dependent for their crops, is naturally first in order. In the newer States, where artificial fertilizing as yet lies in the future for cultures on the large scale, the subjects which should first engage the attention of the experiment stations are: The peculiarities and best adaptations of soils; the best modes of maintaining and increasing their productiveness; the testing of new crops, or breeds of stock, both as to adaptation and quality; the best processes of manufacture of agricultural products, such as sugar, cheese, butter, textile fibers, dried fruits, etc., as well as the examination of natural products of all kinds, so far as they are of general interest.

The salutary influence of such establishments, when placed on a proper basis to insure efficiency, can hardly be overrated. The testimony of Germany on this point is overwhelming, and the continual increase of these stations, all over Europe, clearly points the way for us. And, considering how much depends upon beginning in the right way—how many losses and failures might have been, and may hereafter be avoided, by a previous scientific investigation of facts and figures, there is, with us, a double reason for inaugurating this rational system at once. But, apart from the direct pecuniary benefit, there is another point of even greater importance to be gained, namely, to excite the interest of our industrial population in the rational and scientific management of agriculture, as well as of mining, smelting, and other industries in which no one now thinks of engaging without the help of a proper educational preparation. The local experiment stations will be the centers from which rational and correct practice will radiate in all directions, here as well as in Europe; and it is through their influence that we may expect the ranks of our agricultural students to be recruited more effectually, and on a sounder and more lasting basis, than through all the legislation that can be brought to bear directly on industrial education.

I have previously adverted to the propriety of making these

experiment stations the place where the agricultural students, after completing their course of instruction at the University, should go through the practical course required to fit them for successful management of commercial establishments; not because I consider experimenting a proper means for that especial purpose, but because such establishments must of necessity be placed under the management of exceptionally able and progressive men, known as such in the region where they are to exercise their influence, and therefore more than usually competent to superintend the practical instruction of the young men placed in their charge. Doubtless, ultimately, these graduates so instructed, and thus combining all the best conditions of efficiency as leaders of progress, would, by common consent, themselves become the superintendents of these local "model farms and experiment stations."

So far, therefore, from regarding the propositions for the establishment of model farms in other portions of the State than at Berkeley, as hostile to the interests of the agricultural department of the University, I consider them as the manifestation of a true and legitimate want; it being felt by the residents of the four or five essentially distinct climatic divisions of this large State, that nothing short of such establishments, localized for the express benefit of each, can accomplish the end of giving them the advantage of scientific aid in the many questions which can be determined only by local trial. The mistake is to suppose that such establishments could be efficiently managed without some central directive agency; for each one would be crippled for want of the ample resources which, once placed at the command of the University, will equally well serve *all* in those matters for which no *one* could afford to employ competent and disinterested persons through the year. At the same time, these establishments would furnish excellent opportunities for such instruction in the best of handicraft, as may be desired by those not able or desirous to have their sons go through a full University course.

WORK DONE UP TO THIS TIME.

The appropriation of two hundred and fifty dollars placed in my hands for a beginning of the work of an industrial survey and experiment station, originally intended to be largely expended in the personal examination of important regions, has, under advice, been carefully husbanded by me, after the failure of the appropriations asked of the last Legislature, in order to insure at least the continuation of the home work. Partly for this reason, and partly because of the very limited time at my disposal for anything outside of my duties as an instructor, I have made but few excursions; but have endeavored to obtain the coöperation of individuals and agricultural societies all over the State, in communicating observations, questions, and specimens for examination. Of late, the response to these invitations has become quite extended and liberal, so as to give more than full occupation to my laboratory assistant; while the discussion of results, the writing of reports on the same, answers to inquiries and general correspondence through the mail or the public press, has often taxed my own working powers to their utmost limits. I think that the useful information thus obtained and spread over the State through the channels referred to, as well as some public meetings and discussions in which I have been enabled to partici-

pate, have been instrumental in exciting a good deal of interest among farmers, and in promoting a better understanding of the aims and objects of the agricultural department of the University. The fact that I have not been out among the rural population as much as might be generally advantageous, has been repeatedly held up to me, and by the light of my past experience elsewhere I fully appreciate the force of the remark. But the impossibility of making myself ubiquitous requires no comment, and so long as the class duties of the department rest on myself alone, I do not see that I can materially increase the time given to field examinations.

A summary of the home work done (principally by the hands of my assistant, Mr. Frank Sutton), with brief discussions of the results, accompanies this report; and I respectfully recommend its publication in connection therewith, in accordance with the provisions of the "Morrill bill." I should add, in explanation, that a large portion of the assistant's time has been heretofore occupied in preparing the diagrams and tables for the illustration of my lecture course, arranging and labeling collections and specimens, and similar work detracting seriously from the opportunity for pursuing special investigation.

It is intrinsically obvious that without the hearty coöperation of the agricultural population, the agricultural department of the University can neither be successful in imparting instruction, or in furthering the development of rational agriculture in the State. To secure this coöperation has been my earnest effort, here as elsewhere; and the character of unusual intelligence claimed (justly, as it seems to me,) by the farmers of this State, assures me of ultimate success. With better means at my command, I could have accomplished much more than I have done during the past two years; and what I have now to show must serve merely as a sample of the kind of work intended to be done hereafter. And I trust that in calling upon the coming Legislature for some provision enabling us to place this department upon a more efficient footing, we shall have the support of the farmers' influence.

CULTURE EXPERIMENTS ON THE UNIVERSITY GROUNDS.

The lack of funds has been most painfully felt, as before remarked, in the deficiency of the proper means of illustration, and in the necessity for restricting, to the utmost, the expenses incurred in culture experiments on the University grounds. The latter have been of a two-fold character. The larger portion of the area was divided into large plots (of from one and one-half to two acres), on which the effects of different depths of plowing on the hay product from wheat was to be tested; while one, or during the present season, two, series of smaller plots, of the customary size of two by four rods, were devoted to testing the effect of different fertilizers upon the grain and straw product of both wheat and oats.

During both seasons the circumstances have been peculiarly unfavorable to the attainment of definite results, which in any case can only be expected to become of general value after trial during a series of different seasons.

As regards the first season, the circumstance that the entire grounds had been plowed as deeply as possible the previous year, rendered the experiments as to the effects of depth of plowing almost nugatory.

tory. The controlling circumstance in eighteen hundred and seventy-six was the very heavy and continuous rains, which so compacted the heavy soil that slight differences in the lightness or location of the plots exerted more influence than either depths of plowing or manure. It will be seen by reference to the table of results, that while in some cases the grain and hay product was increased or diminished in accordance with the natural expectation, in others the reverse occurred; and in most cases this was traceable to the fact that a wash happened to lie on one plot, where the grain was stunted from extreme hardness of the soil.

In the year eighteen hundred and seventy-five and six, the grain was sown in December, and thus suffered all the ill effects of heavy rain on a stiff soil. In eighteen hundred and seventy-six and seven, sowing was deferred, from want of available labor, after the first, and, as it turned out, only rains of autumn, eighteen hundred and seventy-six. As a consequence, the ground was not again in condition for sowing until late in the season, and after that had only a few very light showers to dampen the surface. It came up finely, but altogether failed to stool, so that any inequality in the quantities sown would bear directly upon the result. I, therefore, determined to weigh the entire product of each plot, large as well as small, to diminish as much as possible the error from this cause.

This year the differences of depth in plowing (the same plots having been used for the same depth as before) became very obvious so soon as the dry season set in. The wheat on one of the four-inch plots seemed, at one time, likely to dry up altogether without heading; while the eight and twelve-inch plots, though suffering, continued to show growth. Then came several weeks of cool damp weather, which caused all the grain to rally surprisingly. It all finally headed, and at that time there was an average difference of about three inches in height between the four-inch plot and its neighbor, the eight-inch one. Between this and the twelve-inch field there was a perceptible difference in vigor, but not in height. All were finally cut on the ---- days of June.

As regards the grain plots, the results are much less satisfactory, partly for the intrinsic reason that in the absence of a proper amount of moisture the manures had but little chance for action; partly for the very unfortunate circumstance that so soon as the grain began to form, all the squirrels inhabiting the vacant lots surrounding the University grounds, resorted to these grain plots as the most promising pasture within their reach. While the animals inhabiting the University grounds, themselves were kept well under control by means of strychnine, it was impossible to keep in check similarly those living outside, in all directions, and either swarming in at odd times in the day, or else repeopling the empty burrows of their defunct brethren within the inclosure. Much of the grain was thus almost destroyed on foot, so as to render it obviously useless to attempt weighing the product; and, after harvesting, the unavoidable delay in threshing out the grain of the plots deemed worthy of trial, gave the little animals another opportunity, of which they availed themselves to the full extent. The results of the experiments in the series of plots nearest the fence can thus hardly be considered as deserving of confidence. Those in the upper series, nearest the orchard, are less affected by this source of error. But it is a grievous fact, that so long as this state of things continues (and it appears almost impossible to

enforce the present squirrel law so as to accomplish its end), our experimental grounds can hardly be made available for quantitative experiment in agriculture, so far as seeds suitable for the consumption of the squirrel tribe are involved therein.

I cannot omit to remark, emphatically, that the want of sufficient means distinctly available for the purposes of experiment, has largely been instrumental in aggravating the influence of these several causes of failure. So long as the regular working force needed to keep up the University grounds must be detailed to perform the work required for experimental purposes, so long must it frequently happen that other things, imperatively requiring to be done, will interfere with the doing of the experimental work just at the right moment, or with the dispatch often needed to "catch the season" upon which success or failure so frequently depends. Even some of the most needful implements are not now owned by the University, and sometimes cannot be had when needed. A good roller, a mower, hay press, revolving seed sower, grain drill, and a few other fundamental implements, must be at command of the experimenter whenever needed, and not at the convenience of the outside owner, if experiments in grain and hay crops are to be continued with a prospect of success. If the amount of actual work to be done by these implements seems small when compared with their cost, it must be considered that experiments are of necessity costly, and in addition thereto, useless, unless done *exactly* right. Such implements are, moreover, needed for the purposes of instruction, to illustrate principles by practice. It might not be of much use to have on our grounds, "life size," such machines as headers and threshing machines, because we could not put them in operation on a small scale so as to give any better idea of their performance than we could by diagrams and descriptions. But aside from such as these, our collection of implements and models should be as complete as possible.

In this connection I would also strenuously recommend the acquisition of the collection of the several varieties of cereals and other field crops made by Mr. William Brenner, and heretofore exhibited at the Mechanics' Fair. It contains a good representation of all the ordinary and many rare varieties, both from Europe and Asia, and would be a very valuable addition, both to our means of illustration and to the list of experimental crops, since many of the seeds are still quite fresh.

All of which is respectfully submitted,

EUG. G. HILGARD,
Professor of Agriculture, etc.

APPENDIX

TO THE

REPORT OF PROFESSOR E. W. HILGARD.

CULTURE EXPERIMENTS.

RESULTS AND DISCUSSION OF THE CULTURE EXPERIMENTS MADE ON THE UNIVERSITY GROUNDS.

TABLE I.

Showing wheat-hay product per acre on land plowed to different depths.

On Ridge—East.	1875-6.	1876-7.
1. Plowed 4 inches deep	1,480 pounds.	945 pounds.
2. Plowed 8 inches deep	1,316 pounds.	1,502 pounds.
3. Plowed 12 inches deep	1,060 pounds.	1,595 pounds.
4. Plowed 4 inches deep.....	1,080 pounds.	1,196 pounds.
5. Plowed 8 inches deep.....	1,048 pounds.	1,123 pounds.
6. Plowed 12 inches deep.....	1,216 pounds.	Grain experi- ments. 1876-7.
Foot of Slope—West.		

In 1874-5 the whole of the land had been plowed to the depth of a foot, as near as possible. The effect of this deep plowing, as the result shows, continued through the season 1875-6, so that the shallow tillage preceding the sowing in the four-inch plots produced no sensible difference. The high yield of Plot No. 1 in this season is remarkable, it being esteemed the poorest land of the whole tract, and including the point where the specimen for the analysis of the hill adobe (see above) was taken; but being on the ridge it had the advantage of better drainage than any other plot during that very wet season. Plot No. 6, on the contrary, is in general the best of the whole, and for that reason was chosen for the manure experiments with grain, the following season, so as to compare its results with those on the pure hill adobe.

The season 1876-7, being the very reverse of the preceding one, the presence or absence of moisture proved the controlling element, as was stated in the general report (page 91) the difference in favor of the twelve-inch plot, as compared with the two four-inch ones, of 545 pounds on one hand, and 400 on the other, is certainly sufficiently striking, and would this year more than pay for the difference in the labor or cost of tillage. At the same time, so far as they go, these results would seem to show that the effect of *one* deep plowing may safely be expected to continue for two years; or, in other words, that it need be repeated in this kind of soil only every second year, to obtain the maximum crop that the soil will afford. In the lighter soil of the San Lorenzo neighborhood, Mr. William Meek has adopted the practice of "breaking up the hardpan" every third year, and thinks this sufficient.

As regards the eight-inch plots, the low yield of Plot No. 5 during both seasons may be partially accounted for by the circumstance that it happens to include the broadest part of two ridges of hill adobe, which it traverses. Plot No. 2 lies just where the hill "breaks off," and thus receives the surface washing of the ridge first; it appears to contain the best average in the two acres, and so far as the evidence goes, it seems doubtful that within the two last seasons the twelve-inch plowing has done much more good than the eight-inch.

I have, in addition to the above experiments, during the dry season 1876-7, made one with maize on my own premises, with results sufficiently striking. The soil is a mixture of the hill adobe proper with the lighter soil of the mountains; such as usually forms the slope of the foothills. It was plowed twice between December and April to the depth of twelve inches, and once in between with a light one-horse plow; it was, therefore, very mellow. It was planted to corn during the last week of April, within a few days of, and from the same batch of soaked seed corn that served to plant several other patches in my immediate neighborhood, the soil being substantially the same in all; but in all but mine, plowed only about five inches deep. The last shower of the season helped to bring up a very fair stand in all. My corn grew slowly but steadily, with a healthy color; its leaves did not once curl during the severest part of the season, and it attained the usual height of its variety; it yielded a fair crop of "roasting ears." That in the other patches mostly tasseled when from twelve to twenty inches high, with sickly yellow leaves, most of the time twisted and pointing straight up to the sky. Of course, none of it made ear; it was fed green, such as it was.

Doubtless there have been numerous experiences of the same kind throughout California. It is to be hoped that the lesson taught by this dry season, as to the advantages of deep culture, and the fact that it may, in a great measure, stand in lieu of irrigation, will not soon be forgotten.

TABLE II.

Culture Experiments with Manures, 1875-6—East Plot (top of ridge). Original Record of Weighings of Product.

	9a	10a	11a	12a	13a	14a	15a	16a
	Unmanured.	Superphosphate, 12 lbs.	Ammonia Sulph., 10 lbs.	Unmanured.	Potashes, 10 lbs.	Plaster, 12 lbs.	Lime, 15 lbs.	Unmanured.
9a Straw -	93	80	88	62	59	100	126	90
Grain -	58	44	56.5	38	35	61	65	41
					T	S		16a
Straw -	98.5	86.6	90.6	82.7	71	86.6	147.7	137.9
Grain -	49.2	41.3	58.1	37.4	50	55.1	82.7	67
	U	N	M	N	U	R		16b
Straw -	100.5	84.71	102.4	57.1	76.8	84.7	84.7	
Grain -	41.4	31.5	43.3	29.5	23.6	29.5	33.5	1b
								Not weighed.
Straw -	108	102	120	88	82	Plaster, 12 lbs.	Lime, 15 lbs.	Unmanured.
Grain -	43	50	48	45	84	T	46.3	1a
						A	33.7	Not weighed.
	W	N	H	E		T		
8a	7a	6a	5a	4a	3a	2a	1a	

NOTE.—The two outer rows of plots are all of the usual size of two by four rods, or one-twentieth of an acre in area. The paths separating them (three feet wide) are omitted in the table to save space. The two middle rows of unmanured plots were of half size only, but their product has been multiplied by two in all cases, in order to facilitate comparison. The products of plots 1a and 1b were not weighed because of their having been badly washed, and also attacked by squirrels.

TABLE III.

Culture Experiments with Manures, 1876-7—East Plot. Original record of weighings of product.

Straw	N	W	H	E	A	T	not	weighed,
U	N	M	A	N	U	R	E	D
		on	account	of the	destruction	by	squirrels.	
Straw - 31.5		46.3	41.4	41.4	32.5	23.6	22.6	21.6
Grain - 10.8		11.8	13.8	14.8	13.8	2.9	2.9	2.9
								1b
Bone meal, 30 lbs.		Superphosphate, 20 lbs.	Ammonia Sulph., 12 lbs.	Unmanured.	Potashes, 15 lbs.	Plaster, 20 lbs.	Line, 50 lbs.	Unmanured.
8a		W	H	E	A	T		1a
Straw - 42	8a	7a	6a	5a	4a	3a	2a	1a
Grain - 7		42 14	50 16	40 16	35 10	26 4	36 5	26 4

The grain product of Plots 1a, 2a, 3a, and 8a, as well as that of the adjacent unmanured middle plots, is materially affected by the depredations of squirrels; but the straw may nevertheless serve for comparison.

TABLE V.

Culture Experiments with Manures, 1876-7—East Plot. Straw in Plot 8b assumed as 100; the product of the rest calculated in proportion, for direct comparison.

9a	10a	11a	12a	13a	14a	15a	16a
Straw	W and	H grain	E from	A these	T plots		16a weighed
9b	on	account	of	destruction	by	squirrels.	16b
U	N	M	A	N	U	R	D
Straw - 100	146.8	131.2	131.2	103.1	75	71.8	68.7
Grain - 34.4	37.5	43.7	46.9	43.7	9.4	9.4	9.4
1b							
8a	Superphosphate, 20 lbs. W	Ammo. Sulph., 12 lbs. H	Unmanured. E	Potashes, 15 lbs. A	Plaster, 20 lbs. T	Lime, 50 lbs.	Unmanured. 1a
Straw - 133.2	133.2	158.6	139.7	111	82.5	114.2	82.5
Grain - 22.2	44.4	50.7	50.7	31.7	12.7	15.8	12.7
8a	7a	6a	5a	4a	3a	2a	1a

NOTE.—The remarks made regarding the outside plots mentioned in Table III, of course apply equally to Tables V and VII.

TABLE VI.

Culture Experiments with Manures, 1875-6—East Plot. Straw in each middle unmanured plot assumed as 100; the product of each adjacent manured plot calculated in proportion.

	9a	10a	11a	12a	13a	14a	15a	16a.	16a.
	Unmanured.	Superphosphate, 12 lbs.	Ammo. Sulph., 10 lbs.	Unmanured.	Potashes, 10 lbs.	Plaster, 12 lbs.	Lime, 15 lbs.	Unmanured.	2 rods.
9a Straw - Grain -	94.4 58.8	92.2 50.7	97.1 62.3	75 46	83.1 49.3	115.4 70.3	85.2 44	65.2 29.7	
Straw - Grain -	100 50	100 47.7	100 64.1	100 45.2	100 70.8	100 63.6	100 56	100 48.5	16b
Straw - Grain -	100 41.2	100 37.2	100 42.3	100 51.7	100 39.7	100 34.8	100 39.5	Not weighed.	1b
Straw - Grain -	107.5 42.8	120 59	117.1 46.8	154 78.7	106.7 57.2	100.3 41.3	113.7 39.8	Not weighed.	1a
	8a	7a	6a	5a	4a	3a	2a	1a	

The results are here tabulated so as to afford an easy comparison of the product of the manured plots with those of the immediately adjacent unmanured ones, as most likely to show fairly the effect due to the manure. It must be remembered that here, the numbers in adjacent *manured* plots bear no direct relation to each other. Also, that the extraordinary difference in the products of Plots 5a and 5b, is confessedly due to stagnation of water on the latter, drowning out a portion of the grain entirely.

TABLE VII.

Culture Experiments with Manures, 1876-7—East Plot. Straw in each middle unmanured plot assumed as 100; the product of each adjacent manured plot calculated in proportion.

9a	9a	10a	11a	12a	13a	14a	15a	16a
Straw	N	W	H	E	A	T	on	account
		and grain	from these	plots	not	weighed		
9b	N	M	A	N	U	R		D 16b
			of	destruction	by	squirrels.		
Straw	100	100	100	100	100	100	100	100
8b	N	M	A	N	U	R	13	D 1b
Grain	34.4	25.5	33.3	35.7	42.4	12.5		13.6
8a								
Bone Meal,		Superphosphate,	Ammonia Sulphate,	Unmanured.	Potashes,	Plaster,	Lime,	Unmanured.
30 lbs.		20 lbs.	12 lbs.	E	15 lbs.	20 lbs.	50 lbs.	1a
133.2		90.7	120.8	96.7	107.6	109.9	158.9	119.9
22.2		30.2	38.7	38.7	30.7	16.9	22	18.4
8a		7a	6a	5a	4a	3a	2a	1a

See remarks to Table III. It will be seen that in this mode of representation, the effect of the lime in Plot 2a is brought out conspicuously; so also is the fact that this year the product of Plots 5a and 5b do not differ seriously, there having been no washing or stagnation of water.

TABLE VIII.

Culture Experiments with Manures, 1876-7—West Plot (lower end of field). Record of original weightings of product, in the plots not destroyed by squirrels.

		4 rods.				2 rods.			
	Bone Meal, 20 lbs.	Unmanured.		Superphosphate, 20 lbs.	Unmanured.	Plaster, 15 lbs.	Unmanured.	Lime, 30 lbs.	
		O	A	T	S				
Straw -	50	53	62	49	65.5		75	100	
Grain -	6	7	10	8	14		19	30	
Straw -	48	68	52	50	64		70	76	
Grain -	14	8	8	13	20		17	24	
T	N M	A	N	T	R		E	D	
Straw -	36	56	28	22			60	56	
Grain -	4	2	6	6	16		18	16	
Bone Meal, 20 lbs.		Unmanured.	Superphosphate, 20 lbs.	Unmanured.	Plaster, 15 lbs.	Unmanured.	Lime, 30 lbs.		
		W	H	R	A	T			
Straw -	35	35	29	29	48	47	46		
Grain -	3	4	19	13	19	21	16		

This plot, sown a week later than the "East Plot," missed the last shower of any consequence, receiving a mere fog drizzle, with damp weather lasting for several days, which brought up the first blades. Its average product is thus exceedingly low—so near the lowest limit that the results must in any case be liable to great variations from local accidents. In addition to this, the greater portion was destroyed by squirrels, which attacked every portion of the plot more or less. The results are therefore not thought to be sufficiently reliable to make their discussion in the same form as those in the "East Plot," of practical value. The soil in this plot is partly good black adobe.

GENERAL RESULTS OF THE CULTURE EXPERIMENTS.

It is well understood in general, that culture experiments cannot lead to perfectly reliable conclusions, unless continued through a series of years. The causes of this unreliability of conclusions, based upon the experiments of one or two seasons only, are obvious, and have been especially conspicuous in the two years' experimental cultures here reported. During both years, causes entirely beyond the control of the experimenter on the large scale, have exerted controlling influence over the results, so as to obscure greatly, and some cases completely extinguish, the influence of the causes intended to be efficient.

The wet seasons of 1875-6, in compacting the heavy soil and drowning out the crops on portions of the experimental plots, reduced the effects of the manures used to a minimum, and made the product of adjacent unmanured plots so variable as to render their use for comparison very uncertain. The fact that small amounts only of the several manures were purposely used, in order to test the smallest quantity available for practice, of course increases the elements of uncertainty as to their real efficacy.

For the season 1876-7, larger amounts of manure were used, the effects of the small doses of the year before having proved too small to be definite. But now the extreme dryness of that season again reduced the effect of manures to a minimum. There was not water enough in the soil to render them available to plants; moreover, the crops came so near the lowest limit of production, that very slight outside causes, influencing the retention or absorption of moisture, were likely to overslaugh completely the effects intended to be observed.

These facts exemplify strikingly the weak points of culture experiments in general, unless conducted with the most perfect appliances, and with the utmost circumspection, by competent observers.

Had the experimental plots been thoroughly underdrained, and had irrigation arrangements been at command, the damaging influence of both the wet and the dry season on the experiments might have been in a great measure prevented. In the absence of these facilities for controlling moisture, but little progress has been made toward the object to be attained, viz., a knowledge of the cheapest and most available means of rendering productive the upland adobe of the Coast Range foothills.

Nevertheless, a close discussion of the record, taking into account the greatest probabilities as regards local differences, would seem to lead to the following conclusions:

1. The use of *potash* manure, and of *plaster*, seems to have exerted no influence whatsoever upon the product, either as to straw or grain.

2. The effect of ammoniacal manure is doubtful; but there appears to be an increase of the whole product, in wheat, and of the straw product as against that of grain. On the whole, such manures do not seem likely to pay, in view of their high cost.

3. The beneficial influence of the larger dressings of lime used in 1876-7, seems hardly questionable. The heavy difference between the products of Plot 2a, and of the others alongside, is too great to be accidental; and the results of the experiments in the "West Plot," however vitiated by the inroads of squirrels, point to the same conclusion. The limed plots in both cases lay near the part of the

field most exposed to these animals; hence, the large straw product would be likely to have carried with it a correspondingly larger amount of grain, had the latter not been partly consumed by the rodents. It is well known that dressings of lime counteract the tendency to excessive production of foliage, and favor fruiting.

4. As to the phosphates (whether superphosphate or bone meal), there seems to be no room for doubt that their use increased the whole product in the East Plot, where there was a chance for action during both seasons. Compare the products of Plots 7a and 7b, and 8a and 8b, during the two seasons. The small grain product of 8a in 1877 is only apparent, much of the grain having been consumed by squirrels, as was the case in all the outside plots, north, west, and south.

It will be observed by reference to pages 100 and 101, that these conclusions, based upon the culture experiments, tally very closely with those resulting from the discussion of the mechanical and chemical analysis of the hill adobe. The mechanical analysis showed that on account of the comparatively small amount of clay for so heavy a soil, the use of lime for its improvement would be likely to be profitable. The culture experiment confirms this, and indicates that the use of from six hundred to one thousand pounds of lime per acre will be followed by a material improvement in productiveness, and, doubtless, tillability.

The chemical analysis shows, for so heavy a soil, a great deficiency in phosphates. This indication, also, is confirmed by the culture experiments.

The chemical analysis shows a small supply of potash, as compared with the lowland adobe; but it shows at the same time an amount of lime (nearly one-half per cent.), whose action, as experience shows, is likely to maintain a current supply of available potash sufficient for crops. Here, also, the culture experiment (whose results in consecutive years are contradictory), does not contradict the indications of analysis.

But there is one material difference between the merits of the two methods of investigating soils, viz:

By the culture method we have in the course of *two seasons* obtained some tolerably definite hints as to the probable best mode of improvement of the hill adobe; requiring confirmation by at least one or two years farther experiment.

The same indications have been obtained, but in the most definite and unequivocal manner, by what is equivalent to about *two weeks* work of a competent chemist; and, in addition to these practical hints, the analysis and examination has furnished such a complete picture of the nature of the soil in every respect important to practice, that few questions that may hereafter arise in regard to its adaptation and treatment, will not be essentially elucidated by its results.

It would seem that this is unquestionably the method by which all the more important soil varieties of the State should be examined, in order to bring whatever lights science may afford to practice, to bear upon the farmer's treatment of his soil. The slow process of blind experimenting on farms, or even that of culture experiments with manures, so exclusively and persistently recommended by some as *the* method of soil investigation, will always fail to satisfy the demands of practice, when it is desired to produce the greatest possible

improvement with the least expenditure, both of time and money. It is when guided by the previous investigation of the soil by competent hands, that culture experiments become, not only much more definite in their results within a reasonable time, but also much less expensive, since the greater part of such as would lead to no useful result can be foreseen and excluded as unnecessary.

During the season 1877-8, substantially the same culture experiments will be repeated; varied, however, in this, that a portion of the hay experiment plots has been dry-sown in summer-fallowed ground, while the rest will be sown, as usual, after the ground has been thoroughly wetted by the rains.

ANALYSES OF SOILS.

The fact that plants, in their development, take from the soil certain ingredients which, when returned to it, serve to maintain or increase its fertility; while, if such restoration is omitted, the soil ceases to produce profitable crops: early led to the idea that the chemical analysis of soils ought to give us definite information concerning their productiveness. For some time such analyses were eagerly sought for, and were made in large numbers. But it soon became apparent that, in very many cases, there was no direct relation between the present agricultural value of soils, and the percentage amounts of plant-food shown to be contained in them by the ordinary methods of analysis. The consequence was that, for a period of fifteen or twenty years, soil analysis was held by most chemists to be incapable of rendering practically valuable services to agriculture, and was almost abandoned. As usual in such cases, an over-estimate led, for a time, to the opposite extreme. It was attempted to explain the complicated processes of plant-nutrition under infinitely varied circumstances, without the most elementary knowledge of the soil's peculiarities of composition—an undertaking which, as regards the manufacturers' raw materials, would be deemed absurd in any other technical pursuit.

It has now come to be well understood that while chemical soil analysis cannot, as yet, achieve all that we could desire—while it cannot, for instance, show with certainty whether or not a soil is in condition to yield a full crop for the time being: yet it is equally true that *without* such knowledge of the soil's prominent peculiarities as chemical analysis can give, we are reduced to mere blind experimenting, so soon as the question arises, *by what means its fertility may be most cheaply maintained or restored*. When analysis has shown the *absence* or *great scarcity* of certain important soil ingredients, we are at once directed to the addition of these as the first step in improvement. If, on the other hand, an *abundance* of any or all is shown by analysis, we come to the conclusion that the addition of these would probably be a waste of money, and that, if the soil fails to produce, the fault lies either in its physical condition (which must be rectified by tillage, drainage, and the like), or in the fact that the ingredients, though present, are not in an *available* state, so as to be readily absorbed by the roots; and that, therefore, the use of manures, processes, or crops tending to correct this condition, will be the cheapest mode of improvement.

It is obvious that this distinction between the available and una-

vailable part of the plant food contained in the soil, is of capital importance. If we were able to determine with certainty how much of the sum total of such ingredients, as shown by analysis, is in one or the other condition, soil analysis would be of the same direct value to the farmer that assaying is to the miner and smelter. Many attempts have been made to arrive at this result, but, as yet, with only partial success. The reason is, that the solvents employed by plants in the absorption of food from the soil, and the circumstances under which the process takes place, are most difficult to imitate in the laboratory, even if they were perfectly understood, which as yet is not the case. Then again, different plants differ in this regard; so that a solvent accurately representing the extraction of the soil by *one* kind of plant, would not hold good for another. Moreover, the mechanical or "physical" condition of the soil, its "lightness" and "heaviness," its power of attracting and retaining water or moisture, its relations to drainage and local climate—all these things may affect the agricultural value of a soil quite as much as its chemical composition, and must be known or investigated in order to judge of the soil's capabilities.

In other words, while the knowledge of the soil's chemical composition is *indispensable* to a correct judgment of its general character, best mode of treatment, durability, and cheapest mode of improvement: that knowledge is not nearly *all* that is necessary in order to judge of the soil's practical value. All that is or can be known regarding its mode of occurrence, the experience had in its cultivation, etc., must be brought in for the purpose of throwing light upon the points left in doubt by the chemical analysis. And in order that the latter may be intelligently interpreted, it should in all cases be accompanied by the *mechanical analysis*, which determines the *proportions of clay, and of sand of each different degree of fineness*, which enter into its composition, and upon which the "tillable" qualities of a soil mainly depend. The latter process has only of late been so perfected as to render its results capable of numerically definite expression, bearing a constant and ascertainable relation to the facts observed in actual tillage. Most of the determinations of this kind, made with the implements and in the manner adopted, years ago, by the German experiment stations, are altogether incapable of any definite interpretation; and as a consequence have been found of very little practical value in predicting the "tillable" qualities of soils.

It is hardly necessary to dwell upon the importance of such definite foreknowledge as investigations of this character are now capable of furnishing to the farmer, settler, immigrant, or investor. To these it is of the first importance to know beforehand, whether the land upon which they settle is likely to "give out" within a few years or not; what is its character as to facility of tillage; how it can most easily be improved in this respect, as well as in relation to productiveness, and adaptation to particular crops; and whether the material best adapted to its improvement, or the maintenance of its fertility, is near at hand and cheaply obtainable, or must be brought from a distance. On all these, and many other points, analysis, combined with such examination as above detailed, can give categorical information.

It must, however, be borne in mind, that a single analysis of a soil in a region not before examined, may *sometimes* convey little infor-

mation of practical value. It is desirable that the general character of and origin of the class of soils to which it belongs, be so far known as to allow of a comparison with others of similar character, for it is only then that the full significance of the data furnished by the analysis can be realized. For the same reason, persons not chemists, or even chemists not familiar with all the facts influencing any particular soil, may often be unable to interpret, usefully, such analysis. In other words, soil analysis, in order to render its best services, must be carried out systematically, on a somewhat comprehensive plan, and not only here and there by individuals. It is moreover to be remembered that the names and terms used in the statement of these and other analyses are unavoidably, in the nature of the case, unintelligible to those not to some extent versed in chemical and agricultural science. The new words represent new ideas, which cannot be clothed in the old garments. No one can, therefore, justly complain of the use of "hard words" in this connection, unless indeed the *practical* results were not stated so as to be intelligible to any one who can read. In addition to these, however, the record of the work must be given, so that those who do understand the subject itself may judge of the reliability of the conclusions reached.

The analyses here given are the first of what is intended to be a systematic series of investigations, covering all the chief varieties of soils occurring in the several agricultural districts of the State. Standing by themselves, as they do, it is not yet possible to generalize, to any great extent, upon so slender a basis. The prosecution of the subject was cut short by the incoming of other work, bearing more immediately upon pressing questions; and, if that pressure continues, may not be resumed until the work is organized upon a more comprehensive basis. A considerable number of soil specimens, from various portions of the State, have been received for examination, but, for the reason stated, cannot at present be reported upon.

It must not, however, be supposed that the work in question involves anything as absurdly impossible as the analysis of the "soil of every field" in the State. It is well understood by every intelligent farmer, that the soils in his neighborhood, and sometimes those of districts comprising several counties, are readily reducible to a few chief kinds, and their intermixtures. To determine upon, and collect, fairly representative specimens of these chief kinds is the first step. The analysis of these few will determine their prominent characteristics, and upon this basis those of the intermixtures can also be fixed, with the aid of such further analyses, or other examinations, as may seem necessary in order to map out correctly their several regions of occurrence. Experience shows that, with little help, farmers will generally be able to distinguish for themselves the local varieties described.

One of the most important points to be known regarding any soil, is the kind of subsoil by which it is underlaid. This knowledge involves the question as to what extent deep culture with the turning plow may profitably be practiced, and whether an admixture of the subsoil with the surface soil will be desirable. In many cases, in fact, the analysis of the subsoil is of far greater practical consequence than that of the surface layer.

Directions to be Observed in Taking Soil Specimens.

In taking soil specimens for examination by the Agricultural Department of the University, the following directions should be carefully observed—always bearing in mind that the analysis of a soil is a long and tedious operation, which cannot be indefinitely repeated:

First—Do not take samples indiscriminately from any locality you may chance to be interested in, but consider what are the two or three chief varieties of soil which, *with their intermixtures*, make up the cultivatable area of your region, and carefully sample these, first of all.

Second—As a rule, and whenever possible, take specimens only from spots that have not been cultivated, nor are otherwise likely to have been changed from their original condition of “virgin soils”—*e. g.*, not from ground frequently trodden over, such as roadsides, cattle paths, or small pastures; squirrel holes, stumps, or even the foot of trees, or spots that have been washed by rains or streams, so as to have experienced a noticeable change, and not be a fair representative of their kind.

Third—Observe and record carefully the normal vegetation, trees, herbs, grass, etc., of the average land; avoid spots showing unusual growth, whether in kind or quality, as such are likely to have received some animal manure, or other outside addition.

Fourth—Always take specimens from more than one spot judged to be a fair representative of the soil intended to be examined, as an additional guarantee of a fair average.

Fifth—After selecting a proper spot, pull up the plants growing on it, and scrape off the surface lightly with a sharp tool, to remove half decayed vegetable matter not forming part of the soil as yet. Dig a vertical hole, like a post-hole, at least twenty inches deep. Scrape the sides clean, so as to see at what depth the change of tint occurs, which marks the downward limit of the surface soil, and record it. Take at least half a bushel of the earth above this limit, and on a cloth or paper break it up and mix thoroughly, and put up at least a quart of it in a sack or package for examination. This specimen will, ordinarily, constitute the “soil.” Should the change of color occur at a less depth than six inches, the fact should be noted, but the specimen taken to that depth nevertheless, since it is the least to which rational culture can be supposed to reach.

In case the difference in the character of a shallow surface soil and its subsoil should be unusually great, as may be the case in tule or other alluvial lands, or in rocky districts, a separate sample of that surface soil should be taken, besides the one to the depth of six inches.

Specimens of salty or “alkali” soils should, as a rule, be taken only toward the end of the dry season, when they will contain the maximum amount of the injurious ingredients which it may be necessary to neutralize.

Sixth—Whatever lies beneath the line of change, or below the minimum depth of six inches, will constitute the “subsoil.” But should the change of color occur at a greater depth than twelve inches, the “soil” specimen should nevertheless be taken to the depth of twelve inches only, which is the limit of ordinary tillage;

then another specimen from that depth down to the line of change, and then the "subsoil" specimen beneath that line.

The depth down to which the last should be taken will depend on circumstances. It is always desirable to know what constitutes the foundation of a soil, down to the depth of three feet at least; since the question of drainage, resistance to drouth, etc., will depend essentially upon the nature of substratum. But in ordinary cases, ten or twelve inches of subsoil will be sufficient for the purposes of examination in the laboratory. The specimen should be taken in other respects precisely like that of the surface soil; while that of the material underlying this "subsoil" may be taken with less exactness, perhaps at some ditch or other easily accessible point, and should not be broken up like the other specimens.

Seventh—All peculiarities of the soil and subsoil, their behavior in wet and dry seasons, their location, position—every circumstance, in fact, that can throw any light on their agricultural qualities or peculiarities, should be carefully noted, and the notes sent with the specimens. Unless accompanied by such notes, specimens cannot ordinarily be considered as justifying the amount of labor involved in their examination.

Send by Express to "University of California, Berkeley, Cal., care of Prof. E. W. Hilgard."

Communications, inquiries, specimens, etc., relating to agriculture or cognate subjects, addressed to Professor Hilgard, will receive prompt attention and answer, so far as is practicable without the data to be supplied by the agricultural survey.

Method of Analysis.

In order to understand the exact meaning and import of the data and results hereinafter given, it is necessary to state briefly the manner of preparing a soil for analysis, as well as, to some extent, the methods pursued in the latter operation. Without such statement it would not be possible to compare the results with those obtained elsewhere, by other observers, who may have proceeded differently.

The soil specimen, carefully taken according to the directions given, and thoroughly mixed, is well dried, and then rubbed and pounded as fine as can be done with a rubber pestle, which only breaks the clods, but none of the stones or concretions. We then sift out the coarser portions by passing through sieves, the first removing all above the size of about one millimeter,* the second all that remains above the size of one half mm. What passes through the second sieve is the "fine earth," used for analysis.

For the mechanical analysis, about fifteen to twenty grammes (one-half to two-thirds of an ounce) of earth is first boiled with water, in a flask, for twenty-four to thirty hours. This is necessary to disintegrate all the particles formed by the clinging together of numerous fine dust grains. The omission of this boiling process is one of the chief causes which render the older analyses of this kind so unreliable, that differences of fifty and sixty per cent. in the several estimates may be traced to the circumstance.

*The weights and measures used in all scientific work are those of the metric system, which are the same, and are well understood, all the world over. Any elementary arithmetic gives the tables of comparison of this system, now legalized in the United States, with the ordinary weights and measures. The following data, however, are all that are needed in the present Report: 1 inch = 25.4 millimeters; 1 litre = 2.1 pints.

After boiling, the clay is first removed from the mass by stirring up with pure water, and allowing it to settle for twenty-four hours. This operation is repeated until the water remains clear at the end of that time. The clay is then thrown down and weighed.

The sediments from the preceding operation are then transferred to the "soil-washer," a somewhat complicated instrument, acting on the principle that a current of water carries off sediment of a certain "grain" at certain velocities, the grain being coarser the faster the current runs. The same velocity (very small at first) is maintained until all the sediment corresponding to it is carried off and deposited outside of the instrument; higher velocities are then consecutively used, until all the substance in the instrument is removed. The several sediments are then weighed separately.

The summing up of the ingredients always shows a loss of from three to five per cent., which is partly due to matters dissolved by the water, partly to the incomplete deposition of the finest sediments from the large mass of water used. In these tabular statements, the figures of the first column indicate the velocities of current used in running off the sediments, all of which fall within the limits of what would be called fine sand, and silt. All obtained at a velocity less than one millimeter per second are entirely impalpable to the touch.

For the chemical analysis, from two to three grammes of fine earth is digested for five days with hot muriatic acid of a certain strength (specific gravity 1.115); in the solution thus obtained, which contains all that is likely to become available for vegetable growth within the century, the several ingredients are determined quantitatively according to the best methods devised. A separate portion of earth is used for the estimation of the important phosphoric acid, and of the humus and water together. The former is then separately determined by the combustion process; but the latter determination requires arrangements not yet at our command, and had not, therefore, been made. Since the quantity of vegetable matter varies continually, and can be pretty correctly estimated by the eye for the time being, the omission detracts little from the practical value of the analysis. The same holds true, in a measure, as regards the estimation of the nitrates and ammonia in a virgin soil.

It is obviously of first importance to know something of the soils on the University grounds, on which culture experiments are conducted. There are substantially three varieties of soil within the present inclosure, viz:

1. Black adobe, more or less modified by intermixture with the hill soil, occupies a level tract adjoining Strawberry Creek, in the southwest corner.

2. Yellow clay upland soil, derived directly from the disintegration of the soft clay-sandstone forming the bed-rock of the lower foothills. This somewhat intractable, and not very fertile soil, occupies most of the experimental grounds of the University, as well as the site of the buildings, and thence reaches to the foot of the mountain slope.

3. The soil of the mountain slope proper is not quite so heavy, contains a large amount of powdered rock of various kinds, and when so located that it can be cultivated, seems to be more productive than number two.

Nos. 1 and 2. *Black Adobe Soil and Subsoil*, taken on the University campus, in the rear of Cottages 3 and 4, half way to the bridge.

The black soil here is over thirty inches deep, underlaid by a yellow, stony, subsoil. It becomes exceedingly "sticky" when wet, but plows easily when taken just at the right point of moisture; when plowed a little too wet, clots heavily, but the clods tend to pulverize in drying. With shallow tillage, or when left untilled, it forms widely gaping cracks in the dry season. If tilled deeply and thoroughly, it retains moisture and a luxuriant growth of weeds throughout the dry season, and is almost ashy in its tilth.

The soil having been sown to grain, so far as known, for many years, and worn badly, it was deemed best not to take the surface soil for analysis, but a layer from twelve to twenty-two inches depth, and then another from twenty-two to thirty inches; the latter representing the extreme probable range of crop roots. The results of the analyses of both of these layers are given in the following tables:

Mechanical Analysis.

Weight of stones over 1.2 mm.	13.945 per cent.	35.275 per cent.
Weight of stones between 1.2 and 0.6 mm.	6.567 per cent.	7.793 per cent.
Fine earth	79.498 per cent.	56.932 per cent.
	100.000 per cent.	100.000 per cent.

Mechanical Analysis of Fine-earth.

	Adobe Soil. 12—22 inches.	Adobe Subsoil. 22—30 inches.
Clay	31.93 per cent.	33.53 per cent.
Sediment of <0.25 mm. (less than one-fourth millimeter) ..	24.60 per cent.	22.12 per cent.
Sediment of 0.25 mm.	1.17 per cent.	6.03 per cent.
Sediment of 0.50 mm.	3.40 per cent.	5.94 per cent.
Sediment of 1.0 mm.	4.77 per cent.	7.00 per cent.
Sediment of 2.0 mm.	7.49 per cent.	6.42 per cent.
Sediment of 4.0 mm.	6.20 per cent.	7.93 per cent.
Sediment of 8.0 mm. ....	.87 per cent.	3.99 per cent.
Sediment of 16.0 mm.	2.78 per cent.	1.84 per cent.
Sediment of 32.0 mm.	7.66 per cent.	.21 per cent.
Sediment of 64.0 mm.	5.44 per cent.	.02 per cent.
	96.31 per cent.	95.03 per cent.

Chemical Analysis.

	Adobe Soil. 12—22 inches.	Adobe Subsoil. 22—30 inches.
Insoluble residue	77.844 per cent.	69.563 per cent.
Potash .....	.452 per cent.	.348 per cent.
Soda .....	.074 per cent.	.109 per cent.
Lime	1.050 per cent.	.998 per cent.
Magnesia	1.211 per cent.	1.913 per cent.
Br. ox. Manganese .....	.078 per cent.	.093 per cent.
Ferric Oxide	4.675 per cent.	7.208 per cent.
Alumina	7.788 per cent.	13.970 per cent.
Phosphoric Acid .....	.231 per cent.	.116 per cent.
Sulphuric Acid .....	.077 per cent.	.028 per cent.
Organic Matter and Water	5.718 per cent.	6.600 per cent.
	99.198 per cent.	100.946 per cent.

To one familiar with the prairie soils of the southwestern United States, the resemblance of the "black adobe" of California to the "black prairie" of Mississippi and Alabama is very striking. The analyses given above abundantly confirm this supposition. Both the mechanical and chemical composition of the adobe is so nearly like that of the "white lime prairie" soil of Monroe County, Mississippi, that the differences are scarcely greater than might be found in different localities in either region. The important conclusion is, that the experience had in the cultivation of the Mississippi prairie will doubtless be found directly applicable to the black adobe of the Coast Range.

Among the points of most practical import, ascertained by the planters of the South to their cost, is, that of all soils, the black prairie, when once worn out, is most difficult to resuscitate; and that, moreover, these soils "give out" very suddenly, without much warning. This is a pretty general feature of calcareous soils, and is readily explained, on the principle of the old maxim that "lime enriches the father, but impoverishes the son." As a general thing, calcareous soils, when judiciously cultivated, are the most thrifty, as well as (in comparison) most easily tilled. But when cultivated without return of soil ingredients, their exhaustion is very complete, and very lasting.

There is one difference in favor of California adobe; it is about one-third richer in phosphates than the "prairie," and this explains the fact that grain crops, so exhaustive of that ingredient, have for a succession of years been grown without apparent diminution. The comparatively slight effect of superphosphate manure on the experimental grain plots tallies with this conclusion.

The fact that the black adobe contains over one per cent. of lime, (which is four times the amount usually deemed sufficient for the adequate supply of plant food in good soils), of course shows that the addition of any *small* amount of lime, as a manure, would be useless—a conclusion also confirmed by the culture experiments. But it is nevertheless true that the tillability of the soil may be greatly improved by such addition of lime as can be afforded, in cultivation on a small scale, as in truck gardens, orchards, flower gardens, lawns, etc. Of this, more will be said in connection with the "adobe ridge soil."

The sample analyzed probably represents pretty fairly the black adobe of the foothill slope, from San Pablo to within two miles of Oakland.

3. *Adobe Ridge Subsoil*, taken from the crest of the ridge on the Agricultural Grounds of the University, four hundred feet west-south-west from the barn; depth, ten to twenty inches.

Tint, a tawny yellow. Very heavy in working; difficult to till at all times; downwards it gradually passes into "rotten" clay-sand-stone (fragments of which are everywhere intermixed with the soil), at a depth varying from two and one-half to five feet. It is, therefore, ill-drained naturally, and holds water for a long time. Esteemed rather a poor soil.

Mechanical Analysis.

Weight of stones over 1.2 mm.....	13.233 per cent.
Weight of stones between 1.2 and 0.6 mm.....	4.607 per cent.
Fine earth.....	82.160 per cent.

Mechanical Analysis of "Fine-earth."

Clay	-----	18.92 per cent.
Sediment of <0.25 mm.	-----	17.25 per cent.
Sediment of 0.25 mm.	-----	4.87 per cent.
Sediment of 0.50 mm.	-----	6.79 per cent.
Sediment of 1.0 mm.	-----	6.42 per cent.
Sediment of 2.0 mm.	-----	6.64 per cent.
Sediment of 4.0 mm.	-----	3.69 per cent.
Sediment of 8.0 mm.	-----	7.45 per cent.
Sediment of 16.0 mm.	-----	11.03 per cent.
Sediment of 32.0 mm.	-----	9.49 per cent.
Sediment of 64.0 mm.	-----	3.42 per cent.

95.97

Chemical Analysis.

Insoluble residue	-----	86.002 per cent.
Potash	-----	.189 per cent.
Soda	-----	.174 per cent.
Lime	-----	.484 per cent.
Magnesia	-----	.432 per cent.
Br. ox. Manganese	-----	.038 per cent.
Ferric oxid	-----	4.013 per cent.
Alumina	-----	5.532 per cent.
Phosphoric acid	-----	.057 per cent.
Sulphuric acid	-----	.021 per cent.
Organic matter and Water	-----	4.051 per cent.

100.993

The differences in the mechanical and chemical composition of this ridge adobe from that of the valley is sufficiently striking. It contains less than two-thirds the amount of clay, yet it is much heavier in working, owing to the small quantities of the finer sediments, which chiefly serve to break up the extreme tenacity of pure clay, that is but little disturbed by the large sized grains. Then the soil contains less than half as much lime as the lowland adobe; less than half, also, of the primarily important ingredients, potash and phosphoric acid; and, finally, a mere trace of vegetable matter, or humus, as is shown both by its tint and by the smallness of the "organic matter and water" item.

The unproductiveness of this soil is clearly owing to two causes combined: it is naturally poor in plant food; and its mechanical composition makes it so refractory that it is only in exceptionally favorable seasons that what it does contain of plant food can remain available to plants, since, in drying, it becomes of stony hardness, with only cracks to aid the circulation of penetration of air and roots.

This is one of the cases in which improvement by merely supplying the plant food, would be a waste of money, unless the physical condition be corrected at the same time. Underdrainage would probably do this most effectually; green manuring would also be a very important aid. But the unusually small amount of clay for so heavy a soil, promises excellent results from the use of a moderate quantity of *quicklime*, or marl.

To test this conclusion, based upon the known effect of lime in rendering clays less cohesive, the following experiment was made: One hundred grammes (about three ounces) of the soil was kneaded into a paste, and allowed to dry at steam heat. Two other similar portions were similarly treated, after being mixed intimately with, respectively, one per cent. and one-half per cent., by weight, of quicklime, freshly slacked.

The lumps of soil dried without addition, were, as might be expected, of stony hardness. Those of the portion dried with one per cent. of lime, on the contrary, were so crumbly as to make it difficult to handle them without breaking them all into powder. Those of the portion containing one-half per cent. of lime were not quite so loose, but still resembled a very sandy soil, and were readily crumbled to a loose powder between the fingers.

Of course no such extreme change as that noted in the above experiments need be brought about in the soil of a field. This would require an extravagant outlay for lime, even at the rate of one-half per cent. But even a very small fraction of the effect produced by the quantity mentioned would suffice to effect a very material improvement in the tillability of these adobe ridge soils; and in the case of truck gardens, orchards, and vineyards, the saving of labor in tillage, together with the increased thriftiness of the soil, would probably very soon pay for the outlay in the purchase of lime. The quantities needed per acre to produce a profitable result will form the subject of experiment on the University grounds during the coming season.

This kind of "ridge adobe" seems to be of very extended occurrence in the foothills of the Coast Range, and its improvement forms a practical question of wide importance. It should be noted that the addition of lime to any soil renders it much less liable to suffer from drouth, since it not only renders deep tillage much less expensive, but makes the soil itself much more retentive of moisture. In addition to this, an increased thriftiness always follows the use of lime, even where the soil is naturally well supplied with this ingredient.

4. *Stockton Adobe Soil*, from section forty-five, Weber grant of land, property of Mr. D. A. Learned, and sampled by the owner. The specimen analyzed is by him believed to be virgin soil, and was taken to a depth of twelve inches. Regarding the extent of its occurrence, Mr. Learned gives the following data: "It is bounded on the south by French Camp Slough, on the west by the alkali lands bordering the tules. Stockton is near the middle of the western line, which is ten miles long. A line running parallel with, and two miles north of, Calaveras River, is the northern boundary. It extends eastward up the Calaveras eight or ten miles, and up French Camp Slough about the same distance, but the eastern boundary I cannot define accurately. It has a slope west-southwest, about eight feet per mile, and appears as if formed of tule lands, not all at once, but gradually, as the waters of the valley subsided—the latest formed being the richest. Our adobe soils for five to eight years average from fifteen to twenty bushels of wheat per acre, but the yield decreases, and we have to resort to better cultivation and summer fallowing. The average now is about fifteen bushels, with improved cultivation; the yield would be greater if we had as much rain in March and April as you have in Alameda, or in Calaveras Counties."

The soil is dark colored, and very adhesive when wet; in drying, cracks open to the depth of several feet at times. Its thickness, according to Mr. Learned's statement, varies from six inches to four feet, the latter figure coming nearest to its average depth.

Mechanical Analysis.

All passes through a sieve with meshes 1.2 mm. in diameter.

Sand larger than 0.6 mm.	0.36 per cent.
Fine earth	99.65 per cent.

Mechanical Analysis of Fine-earth.

Clay	32.625 per cent.
Sediment of <0.25 mm.	37.115 per cent.
Sediment of 0.25 mm.	4.304 per cent.
Sediment of 0.50 mm.	5.501 per cent.
Sediment of 1.0 mm.	5.617 per cent.
Sediment of 2.0 mm.	2.013 per cent.
Sediment of 4.0 mm.	1.982 per cent.
Sediment of 8.0 mm.	3.145 per cent.
Sediment of 16.0 mm.	2.106 per cent.
Sediment of 32.0 mm.	1.285 per cent.
Sediment of 64.0 mm.	.437 per cent.
	<hr/> 96.130

Chemical Analysis.

Insoluble residue	72.058 per cent.
Potash	.396 per cent.
Soda	.479 per cent.
Lime	1.927 per cent.
Magnesia	1.640 per cent.
Brown ox. Manganese	.056 per cent.
Iron peroxid	6.815 per cent.
Alumina	11.620 per cent.
Phosphoric acid	.179 per cent.
Sulphuric acid	.037 per cent.
Organic matter and Water	5.871 per cent.
	<hr/> 101.078

In comparing this adobe with the black adobe of the University grounds, we find that it differs as to its mechanical composition, in that there is a great predominance of the finer sediments over the coarse ones, the clay and finest sediments making up over sixty-seven per cent. of its weight, against fifty-five in the latter; while of the sediments palpable to the touch, we have here only about eleven per cent., against nearly thirty in the adobe of the coast. In this respect, it greatly resembles the "buckshot soil" of the Mississippi bottom, below Memphis, and like the latter, it was doubtless formed, as Mr. Learned suggests, in the still waters of a reedy marsh, where coarse materials had no access. It is, however, much inferior to the famed buckshot in the plant food it contains, there being only one-third the amount of potash, and one-half that of phosphoric acid found in the latter. In the same respects, it is somewhat inferior to the black adobe of the coast. It contains nearly double the amount of lime contained in the latter, but is somewhat deficient in sulphates. The use of lime on the Stockton adobe, therefore, is not called for, save for the purpose of improving its tilling qualities; but a dressing of gypsum seems likely to help it, especially in producing alfalfa. The large amount of soda shown in the analysis, seems to indicate a tendency to saltiness, which, when inconvenient, could only be remedied by drainage.

I am not well informed regarding the behavior of this soil under tillage and moisture. I should infer that, when reasonably well tilled, it would be likely to crumble under a rain, without forming a crust. If cultivated to exhaustion, it will require long rest or good manuring to make it bear profitable crops again, since the large amount of lime, and the correspondingly large amount of alumina

dissolved in the analysis, show the soil to be in a highly decomposed condition. As in all heavy soils, deep tillage would be of especial benefit here, since apparently the soil remains the same sometimes to the depth of several feet, and new plant food can thus be made available every year.

The subsoil of this adobe seems to vary at different points; in the higher portions it is generally underlaid by yellow or whitish clays, while in what appear to be broad channels of a former time, the subsoil is a whitish hardpan, of a totally different character, of which an analysis follows.

5. *Hardpan Subsoil of Stockton Adobe.* A grayish, or yellowish-white, moderately coherent, yet somewhat friable mass, underlying the adobe in the lower tracts, and varying from six inches to several feet in thickness; underlying it the clays above referred to. "Beneath, at the depth of about fifteen feet, water is reached, which is hard and has a disagreeable taste. At the depth of thirty-five feet, a thin stratum of quicksand occurs, and abundance of better water is obtained. The water is still better, and inexhaustible, at fifty feet; temperature 62° Fahrenheit. All these streams rise to within fifteen feet of the surface in summer, and many of them furnish the same kinds of water bugs that the surface streams do." The chemical analysis of this hardpan gave the following result:

Insoluble residue (chiefly sand and silt).....	64.903 per cent.
Potash.....	.248 per cent.
Soda.....	.404 per cent.
Lime.....	8.502 per cent.
Magnesia.....	2.700 per cent.
Br. ox. Manganese.....	.034 per cent.
Ferrie oxide.....	5.672 per cent.
Alumina.....	6.252 per cent.
Phosphoric acid.....	.324 per cent.
Sulphuric acid.....	.056 per cent.
Carbonic acid.....	6.229 per cent.
Organic matter and Water.....	4.860 per cent.

100.184

The composition of this hardpan removes it from the class of soils proper, to that of marls; containing, as it does, about fifteen per cent. of carbonate of lime. And since, moreover, it contains a third of one per cent. of phosphoric acid (in the shape of bone phosphate, amounting to about three-quarter pounds per hundred weight of marl), and a quarter of one per cent. of potash, most of which must be considered as being in an available condition: it constitutes an efficient as well as easily available fertilizer for the farmers of that region.

It is true that, as has been mentioned above, the Stockton adobe is not specially in need of the addition of lime as plant food. But the use of that substance, as well as of marls like the one in question, will nevertheless be beneficial in improving the tilling qualities of the heavy adobe soils, and especially their resistance to drouth. It might not pay to resort to the use of the marl where it has to be transported to a distance; but where it can be plowed up, or spread over the soil from pits a few feet deep, dug in the field at intervals, the operation can hardly fail to be profitable in the end, but more especially where the soil begins to show signs of exhaustion.

From the mode of occurrence of this marl, I conjectured that, by

accident, if not otherwise, experience must already have shown its usefulness. Upon inquiry from Mr. Learned, I find that such is the case; although, doubtless, the whitish clays have not at times been well distinguished from the marl proper. Mr. Learned says on this subject: "I am fully satisfied from my experiments that the marl will increase the production and render the adobe easier of cultivation. Where the adobe had all been washed away in my vineyard, I planted vines in the marly hardpan, and they have done as well as any. But where the marl is more than a foot deep, it is so porous that vegetation will dry up three weeks sooner than elsewhere." The latter result is, of course, what might have been expected, for marl by itself is rarely a good soil. But it seems that experiments on the effects of marling were inaugurated already by the "oldest inhabitants," probably of the squirrel tribe. Specimens sent by Mr. Learned, of the soil of certain mound-like elevations occurring in the adobe, and noted for their fertility, prove on examination to consist of an intermixture of adobe soil with gray marl. This soil is so loose as to be considered a loam, although it lacks, to a remarkable degree, the sand ingredient usually present. Its looseness, warmth, and thriftiness, is clearly due to the large admixture of lime from the marl, in accordance with the experiment on the ridge adobe on the University grounds, mentioned above. (See page 94.)

From a geological point of view, there can be little doubt that the same marl exists over a large portion of the San Joaquin and Sacramento Valleys; and if a further examination should confirm this supposition, these deposits will prove of no small importance to the farmers of the great valley.

ALKALI SOILS.

This name is applied in California, almost indiscriminately, to all soils containing an unusual amount of soluble mineral salts, whose presence is frequently made apparent by the "efflorescence," or blooming-out on the surface, of a white powder or crust, soluble in water. This "alkali" becomes most apparent in dry weather following upon rains or irrigation. Later in the season it usually becomes less perceptible from intermixture with dust, as well as from the failure of the soil-water to rise near enough to the surface. The first rain, dissolving the salty substances, carries them partly into the water-courses, but chiefly back into the soil; whence they rise again at the recurrence of dry weather.

The immediate source of the "alkali" is usually to be found in the soil-water, which, rising from below and evaporating at the surface, deposits there whatever of dissolved matters it may contain. Such water, when reached by digging, is by no means always perceptibly salty or alkaline; and the same is true of the soil, an inch or two beneath the surface. For since the soil, acting like a wick, draws up the soil-water and allows it to evaporate at the surface, it is *there*, of course, that all the dissolved matters accumulate, until the solution becomes so strong as to injure or kill all useful vegetation. The injury will usually be found to be most severe just at or near the crown of the root, where the stem emerges from the soil.

The most obvious remedy for this evil is, of course, the leaching-out of the injurious salts by flooding, and, if possible, *under-draining*. This method is habitually resorted to in sea-coast marshes, near the

mouths of rivers, after the salt water has been excluded by embankments.

The limited salty spots so frequently met with in the uplands of some regions are promptly cured by a few underdrains, through which the winter rains wash the salts definitively beyond the reach of the soil-water. Such spots are very commonly found extraordinarily fertile afterwards.

The problem of affording relief, however, becomes much more difficult when either a stratum of saline water, or an earth-layer, containing much saline matter, lies a few feet beneath the surface in a level region—as is, unfortunately, very often the case in California. When this happens the evil can only be mitigated, but scarcely altogether cured. According to the value of the land to be reclaimed, one or several of the following remedies may then be employed:

1. When the “alkali” is not very abundant or noxious, *frequent and deep tillage*, may afford all the relief needed. For, inasmuch as the damage is in most cases the result of an excessive accumulation at or near the surface, it is clear that frequent intermixture of the surface layers with the deeper portions of the soil will so dilute the injurious salts as to render them powerless for harm.

With the aid of deep tillage, it is often possible to raise on salty seashore lands, root crops, such as beets or carrots, which absorb a large amount of soluble salts, and sensibly relieve the soil; so that cereal crops may be grown the second or third year.

2. *Underdrains* may so far lower the water-table from which the saline matters are derived, and may so far favor the washing out of the salts during the rainy season, that the latter will thereafter fail to reach the surface so as to accumulate to an injurious extent, with reasonably deep tillage. The roots of plants will go deeper for the requisite moisture, but will not be injured by the weak saline water below.

3. When the quantity of the salt or alkali is small, but its nature such as to be nevertheless very injurious or corrosive, the evil may be greatly mitigated, or sometimes completely relieved, by the application to the soil of *chemical antidotes*, cheaply procurable in commerce. In order that the proper antidote may be chosen, it is of course necessary to determine the nature, and in a measure the amount of the “alkali,” by chemical analysis.

The salts usually found in the California “alkali” soils, so far as they have come under my observation, are of three kinds:

- a. Neutral alkaline salts, such as common salt, Glauber’s salt, sulphate of potassium, etc. These are injurious only when present in large quantities, and relief can then be obtained only by washing them out of the soil—by flooding, under-draining, etc.

- b. Soluble earthy and metallic sulphates and chlorides, such as Epsom salt, bittern, chloride of calcium, alum, copperas, etc. The cheap and efficient antidote to these substances is LIME; in some cases, even a natural calcareous marl will answer the purpose.

- c. Alkaline carbonates and borates. These, especially the former, are injurious in the smallest amounts, rendering the soil-water caustic and corrosive. They appear to be most abundant in southern California, while the second and first class seem to prevail in the Sacramento Valley. The antidote to these, the *true* alkali salts, is *gypsum* or land plaster.

The efficacy of these antidotes depends, of course, upon the pres-

ence of water, without which they cannot act on the "alkali." They should be sown or spread on the surface, and plowed or harrowed in to a moderate depth, just prior to irrigation, where that is used; in the case of plaster, put in with the grain; in that of lime, it should be put in just before a rain, or irrigation, and not at the same time with the grain or other seed.

1. *Salts from "alkali" land on Sherman Island, Sacramento County*, sent by Mr. A. J. Biglow, of Emmaton, and by him collected from the surface of land not too strongly impregnated to grow wheat, though he says there are such spots. In the latter alfalfa, and other tap-rooted crops, seem to do well.

The salts, as received, were somewhat intermixed with soil dust; dissolve freely in water; taste salty and bitter.

The percentage contained in the soil could not, of course, be determined. The analysis gave as the composition of one hundred parts of the soluble salts:

Sulphate of magnesia (Epsom salt).....	93.17
Chlorid of sodium (common salt).....	5.94
Chlorid of potassium.....	0.19
Total.....	99.30

Here the substance chiefly injurious to vegetable growth is clearly the Epsom salt; the proportion present of the others being too small to do harm.

The Epsom salt can be promptly and completely decomposed by means of lime, applied, as before remarked, just prior to rains, or irrigation. The result of its action will be gypsum and simple magnesia, the latter inactive, the former beneficial to most crops.

The application of lime (experimentally at the rate of from four to eight barrels per acre), with fair tillage, will doubtless relieve this land from all injury from "alkali." The latter term is here quite improperly used; the soil should be termed simply "salty."

2. *Alkali soil from near Corvallis, Los Angeles County*; sent by Mr. S. G. Baker, Secretary, on behalf of "New River Grange." December 6th, 1876.

This soil is reported as occurring in streaks, over a considerable district. "Nothing seems to grow on it except salt grass. Common mallows and corn will vegetate on it, but not mature. Fruit trees rot at the roots, and willows at the bark. Beets seem to thrive when irrigated, but when not irrigated grow very small, though much sweeter than when irrigated. It appears to get dry earliest of our soils. I have subsoiled it two feet deep with little benefit. * * * A small patch highly manured with cow manure has been greatly improved. Another small patch coated four inches deep with sand will grow good corn." Brackish water is found at the depth of ten feet, and a plentiful supply of good artesian water at four hundred and fifty feet. "In most cases the land lies well for drainage."

The soil as received is of a mouse color; a light, sandy loam, glistening with particles of mica (as seems to be very generally the case in that region).

It yielded to water 1.62 per cent. of saline matter, which in one hundred parts consisted of

Chlorid of sodium (common salt).....	22.37
Sulphate of sodium (Glauber's salt).....	51.19
Carbonate of sodium (sal soda).....	17.48
Sulphate of potassium.....	8.74
Phosphate of calcium (bone phosphate).....	0.51
Total.....	100.29

The most obviously injurious ingredient in this (a *true* "alkali") soil is the carbonate of sodium, which is readily noticeable in tasting the unleached soil. It is sufficient to dissolve not only dead vegetable matter, but also to attack and destroy living rootlets and bark, when accumulated by surface evaporation.

This is one of the cases in which the use of gypsum will at once destroy the corrosive properties of the "alkali," by transforming it into Glauber's salt and carbonate of calcium (the same as chalk or limestone). If the specimen sent represented correctly the amount of salts contained to the depth of six inches, then about nine hundred pounds of plaster per acre would serve to neutralize completely the soda. This is probably a maximum estimate, and much less of the antidote would probably serve to render the soil capable of bearing crops. This is rendered probable by the fact stated, that sand—a layer of sand on the soil's surface—enabled it to produce corn. The sand would prevent the alkali from accumulating at the surface in injurious quantities, while the water diffused in the soil is evidently too weak to cause serious injury. It would, nevertheless, be advisable to relieve the soil from a portion at least of the large amount of soluble salts, by flooding and drainage, wherever the expense can be afforded. The large amount of potassium salt and phosphate shown by the analysis suggests that, when reclaimed, this soil ought to be profusely fertile.

Experiments in accordance with the above suggestions were to have been made this season under the auspices of New River Grange.

3. *Salty soil*, from the sea-coast flat between Anaheim and the shore, sent by Mr. Chas. D. Ellis, of Anaheim, Los Angeles County, in July, 1876. Said to be fairly representative of the above region, which is flat, and appears to be underlaid by a brackish water at the depth of from four to six feet. In some places the salt shows on the surface only after irrigation, but in low spots it is mostly visible as a white powder or crust, though sometimes dark colored. In the worst spots, seeds fail to germinate.

The sample sent is a dark, sandy loam, glittering with particles of mica, and some salt; with a well marked saline taste.

As the qualitative analysis of the salts of this soil showed it to contain substantially the salts of sea water, pure and simple, a quantitative determination was deemed unnecessary, since no chemical antidote could in this case afford relief. The qualitative analysis showed:

Chlorid of sodium (common salt), large amount; potassium salts, small amount; sulphate of calcium (gypsum), large amount; sulphate of magnesium (Epsom salt), small amount; alkaline nitrates, very small amount.

Here the analysis suggests no remedy. Washing out of the excessive amount of salts by means of under-drainage or flooding, or both combined, is the only final resort. In the Gulf States, good results have attended a system of ridge culture on lands similarly situated; the soil being thrown or plowed up into ridges twelve to

thirty feet wide, sufficiently high to prevent the salt from reaching the surface.

4. *Alkali soil, from Westminster Colony, Los Angeles County*; sent in April, 1877, by Mr. W. G. McPherson, as chairman of a committee on alkali soils, appointed by Westminster Grange—a dark gray, rather sandy soil, glistening with particles of mica scattered throughout the mass. The letter accompanying this sample makes the following statements in regard to it: "This soil is taken from Westminster, Los Angeles County, about five miles from the ocean, and near the center of a tract of about thirty thousand acres now occupied by farmers; and there is no farm of forty acres but has some of this kind of soil, or something similar. * * * The sample sent is of medium strength, varying from it both weaker and stronger. * * * It is a little too strong for barley, but beets will grow on it under favorable circumstances. The subsoil is apparently the same, only growing looser (sandier) downward, to the depth of from four to ten feet, where tough blue clay is met with. Above this blue clay is permanent water (faintly brackish); and below it, at a depth varying from sixty to two hundred feet, is a bountiful supply of pure artesian water. Now, if you can give us a remedy that will render this soil available, you will be conferring a benefit upon a large number of people."

The analysis of this soil resulted as follows:

Soluble salts in the soil, .54 per cent. These salts were composed, in one hundred parts, of—

Chlorid of sodium (common salt)-----	10.57 per cent.
Carbonate of sodium (sal soda)-----	61.48 per cent.
Sulphate of potassium-----	20.62 per cent.
Carbonate of potassium (saleratus)-----	6.59 per cent.
Total-----	99.26 per cent.

The unusually corrosive character of these salts explains the fact that so small a percentage as one-half of one per cent. can materially impair the crop-bearing qualities of this soil. Even if the soil water should not form a lye sufficiently strong to corrode living rootlets, the accumulation of such a mixture on the surface, by evaporation, would be sure to corrode the root crown, and thus cause serious injury. At the same time, the small quantity of the injurious salts renders their neutralization comparatively easy. Here, as in the case of the Corvallis alkaline soil, the remedy is land plaster or gypsum. The amount of the latter required to convert the soda and saleratus contained in an acre of soil six inches deep, into inert Glauber's salt, etc., is about nine hundred pounds. Such complete neutralization, however, is not called for; and as the alkali is sure to be less abundant in the lower than in the upper portions of the soil, the quantity of gypsum mentioned is probably amply sufficient for an average soil of this class; especially if the application be accompanied by deep and thorough tillage, since a well pulverized surface prevents the soluble salts from accumulating on the surface.

Upon the communication of the above results to Westminster Grange, it was determined to test the efficacy of the remedy recommended on a small scale, before the winter rains set in, so as, in case of success, "to make a business of it, instead of a trial, next winter." Mr. McPherson's statement is as follows:

I took one-tenth of an acre, of the same ground that the sample was taken from, and irrigated it; then sowed sixty-five pounds of gypsum on it; then plowed about six inches deep, and sowed thirty-five pounds; then harrowed and planted with corn. Where the water stood on top of the ground, there is a good stand of corn, although it was the strongest alkali, being the lowest ground. But where the land was only sub-irrigated, not more than half the corn came up. I replanted, and only half of that has come up. The first planting is about a foot high and growing vigorously, and has a good color. I think the failure on the dryer part was caused by there not being sufficient water to bring the alkali in contact with the gypsum. Others are experimenting, but have not progressed far enough to report.

Mr. McPherson's explanation of the cause of his partial failure is unquestionably correct. Had the gypsum been put on before irrigation, the success would doubtless have been uniform all over the tract. Gypsum dissolves very slowly in water, and even after irrigation enough would have remained in the soil to counteract any future rising of the alkali during the season.

It is not easy to predict how long the effect of a single application will last, since that depends largely upon the distance of the water table below the surface. The nearer the source of the alkali, the more rapidly will the effect of the plaster be exhausted. The probability is that after one heavy application has been made, a light dressing every year will keep the alkali in check. But the exact measure must be determined by experiment for each locality.

It seems that in the case of the Westminster soil, under-drainage, even where it can be afforded, is not likely to be altogether efficacious, on account of the nearness of the water-table to the surface, and the level character of the latter.

5. *Alkali soil from the neighborhood of San José*, sent by the editor of the "California Agriculturist." "It was collected by Mr. Phil. Herold, just north of the city limits, upon a low alkaline spot, located between Coyote and Guadalupe Creeks, some sixty feet above tide water. The same tract of alkali soil continues up through the City of San José. It is very stiff, hard when dry, and at all times difficult to handle. The most successful attempts at its cultivation have been by deep ditch drainage, copious washings by flooding, and fine surface cultivation * * * to prevent the rising of alkali to the surface. The specimen sent was the "skimming" of the soil, taken in the fall before the rains, and therefore much stronger than the average of several feet below. * * * Wells that have been bored through it strike gravel at about fifty feet. Lands on each side, of a lighter character and better drained through gravel beds, though rich in alkali, are not so much so as to be injurious to vegetation."

The soil received is loose and powdery, of a light gray tint, and of decidedly salty and alkaline taste.

It yields, to water, 14.78 per cent. of soluble matters, of which 0.88 consists of carbonates and phosphates of lime and magnesia, while 14.7 is alkaline salts. The latter contains in one hundred parts:

Chlorid of sodium (common salt).....	6.79
Sulphate of sodium (Glauber's salt).....	75.98
Carbonate of sodium (sal soda).....	14.59
Carbonate of potassium (salcratus).....	2.92

Total	100.28
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This soil, like the preceding, is one of the class whose injurious action will be materially diminished by the application of gypsum, thus transforming the corrosive carbonates into comparatively inno-

cent sulphates. The aggregate amount of salts, however, would be far too large to allow of useful vegetable growth even then, were the whole soil thus impregnated. Evidently this is not the case, and it is quite likely that the use of gypsum may, in the majority of cases, so far mitigate the action of the alkali, as to render the soil available. The fact alluded to above, that thorough cultivation of the surface has been found efficacious in preventing the rise of the alkali, or rather its accumulation on the surface to an injurious extent, is of general application, as heretofore stated; and deserves the first attention of all having land afflicted with alkali, since it is the simplest and cheapest remedy, which will be found sufficient, in a great many of the milder cases, if persistently employed.

ANALYSES OF WATERS.

It was of especial interest to examine the composition of the water supplied from the University reservoir, which is fed by a number of springs situated in Strawberry Cañon, southeast of the University grounds. This water is used for all purposes, is a pleasant drinking water, and as such does not appear to disagree with any one. It is rather hard for washing, requiring a good deal of soap, a part of which floats on the surface; the addition of a little soda or borax measurably relieves this difficulty. It incrusts boilers with a very hard and adherent scale, rendering them liable to being burnt. Its most objectionable character is that when used for watering potted plants, it tends to form on the surface a gluey crust, compacting the soil, and giving rise to a copious moss growth, dwarfing and even killing delicate seedlings. Its composition was found to be as follows:

I. Water from the University Reservoir.

	Grammes Pr. liter.	Grains Pr. gall.	In 100 Parts.
Chlorid of sodium (common salt)-----	0.026	1.54	10.813
Silicate of sodium (water glass)-----	0.053	3.12	21.826
Carbonate of sodium (soda)-----	0.005	0.29	2.031
Sulphate of potassium-----	0.005	0.27	1.907
Sulphate of calcium (gypsum)-----	0.025	1.46	10.173
Carbonate of calcium (lime)-----	0.075	4.37	30.562
Carbonate of magnesium-----	0.051	2.98	20.837
Phosphates of iron and alumina-----	0.003	0.18	1.236
Totals -----	0.243	14.21	99.385

The water does not contain any unusual amount of solid matter, but it is very remarkable for the comparatively large amount of silicate of sodium; which is a rare ingredient, although silica and soda, uncombined, are common enough. The silica usually comes down very soon on boiling waters containing it, being ordinarily dissolved by the carbonic acid gas. Not so in this water, which may be repeatedly boiled down without getting rid of the silica. It is this ingredient, of course, which gradually forms the gelatinous top crust on flower pots, as well as the hard, glassy boiler scale.

Experiment showed the best remedy in both cases to be the addition of about four per cent. of clear lime water, which promptly

causes a flocculent turbidity, and readily "settles" a tankful of the water over night, clearing it also of any clay or other impurities afloat in it. The water so treated contains only three-fifths of the solid matter in the raw water, and is quite soft.

This water is probably a fair representative of much of the spring and well water of the Coast Range, where the rocks are similar.

2. *Water from a mine near El Dorado, Placer County*; sent by Mr. Brooke, through the Secretary of El Dorado Grange; received June 6th, 1876.

This water is reported to exert a remarkable fertilizing effect upon the land on which it flows; it would thus seem likely to furnish a good indication of the means of rendering that soil productive.

The water is colorless, of no decided taste; some flocculent iron oxide (rust) at the bottom of the bottle.

Solid contents, 0.178 grammes per liter, or ten and one-half grains per gallon, therefore not a strong mineral water.

The residue from evaporation does not entirely redissolve in water, but leaves behind a small amount of the carbonates and phosphates of lime, with a little iron, previously dissolved in carbonic acid.

The largest part of the residue, which readily redissolves, consists of chloride of potassium (and a little common salt) and gypsum. The chloride of potassium and gypsum are the prominent ingredients of the water, and upon them its manurial efficacy doubtless chiefly depends; assisted, of course, by the small amount of phosphates. In other words, the water contains all the most prominent mineral food-ingredients of plants, in comparatively large quantities.

The practical conclusion is that gypsum would probably exert a very beneficial influence upon the soil's productiveness; and that instead of using wood ashes for soap making, its *potash* would more profitably be given to the soil, and commercial soda, or "concentrated lye," used in the soap-boiler.

* Miss C. J. Sheldon, Secretary of the Grange, remarks in the letter accompanying the request for an analysis, that the question of fertilizing exhausted soils is already assuming a serious importance in the region under consideration.

3. *Mineral water from a spring on the United States Reservation*, about six miles from Round Valley, Mendocino County, largely used by the Indians, and by them said to be very valuable in its properties.

The water as received was slightly turbid, full of floating pellicles of silica, and of a faintly sulphurous odor; the turbidity probably owing to sulphur. Taste decidedly saline, and a little pungent from the presence of free carbonic acid gas. On boiling it turns turbid, and deposits a white powder, a mixture of silica and carbonates of lime and magnesia. Whole solid contents, 2.9 grammes per liter, or 169 grains per gallon. Of these, 21.8 grains, or 37 grammes per liter, consist of silica and the carbonates of lime and magnesia. The remainder (147.4 grains per gallon, or 2.53 grammes per liter), consists almost wholly of common salt, (chloride of sodium), with small amounts of gypsum, bittern (chloride of magnesium), and a trace of alkaline carbonate. The water is, therefore, very nearly of the composition of sea water, but with the addition of a large amount of earthy carbonates and soluble silica. This renders it almost precisely similar to the waters of the Mudlump Springs in the Mississippi delta, (American Journal of Science, III., Volume I). Any

curative qualities it may possess must be due to the salt, and, perhaps, to the carbonate of magnesia.

As further illustrations of the composition of spring waters on this coast, I subjoin the results of two analyses made, during the vacation, for private parties, but nevertheless of some general interest.

4. *Water from "Terrace Springs," near Napa City; sent by Gust. Schulte, Esq.*

The sample first received had a pretty strong odor of sulphuretted hydrogen, and seemed to contain carbonate of iron. The sample, however, being full of foreign matter arising from an impure condition of the spring basin, the latter was cleaned out, and a new sample taken thirty hours afterward. This was very clear, and showed no odor of sulphur, and but a small amount of iron. It is not an uncommon case that chalybeate sulphur waters are thus temporarily formed by the fermentation of vegetable matter in the spring basins when left to themselves.

The pure water contained 13.5 grains of solid matter per gallon. Of these, six grains are chiefly common salt, with a little sulphate and carbonate of sodium, and a trace of potassium. Four and one-half grains are carbonates of lime and magnesia, with a trace of iron; 3.0 grains are silica; the latter three ingredients held in solution by free carbonic acid gas, which imparts to the water a very refreshing quality.

The amount of solid matters in this water is too small to allow of its being properly considered a mineral water, since many river waters contain a larger amount of solid ingredients. But here, again, we meet with an extraordinary amount of dissolved silica, accompanied by some carbonate of alkali. This seems to be a general feature of the spring waters of central California at least; and it accounts for many of the singular transformations of soft rocks, for the frequency with which quartz, agate, and chalcedony occur in the Coast Range, both in nodules and fissures, and for the petrification by silification of which the "petrified forest" is so prominent an example. Doubtless the water of the Geysers will also be found unusually rich in silica, as is the remarkable water of "Skaggs' Hot Springs," near Geyserville, of which a full analysis is given below.

Examination and Quantitative Analysis of "Skaggs' Lower Hot Spring," Sonoma County; water clear, issuing at the rate of about fifteen gallons per minute, accompanied by copious gas bubbles, which give it the appearance of boiling. Temperature, about 120° Fahrenheit. There is a decided odor of sulphuretted hydrogen, but the amount is too small to be determined. Taste, somewhat alkaline, and pleasantly pungent from the presence of free carbonic acid gas.

Specific gravity, 1.00340. Carbonic acid gas, absorbed, 99.291 cubic inches per gallon, or 4305.5 volumes in 10,000 volumes of water. The gas issuing free is chiefly carbonic acid gas, about one-sixth of its bulk being combustible marsh gas.

COMPOSITION OF THE WATER.	In 10,000 parts.	Grains per gallon.
Chlorid of Potassium.....	0.035	0.200
Sulphate of Potassium.....	0.043	0.250
Chlorid of Sodium.....	1.012	6.081
Iodid of Sodium.....	Trace.	Trace.
Bi-carbonate of Sodium.....	27.672	161.270
Bi-borate of Sodium (borax).....	*4.542	*26.470
Carbonate of Lithium.....	0.010	0.060
Carbonate of Barium.....	0.040	0.240
Carbonate of Strontium.....	0.004	0.024
Carbonate of Calcium.....	0.377	2.197
Carbonate of Magnesium.....	0.191	1.113
Carbonate of Iron.....	0.009	0.054
Alumina.....	0.004	0.024
Silica.....	1.205	7.023
Total solid ingredients.....	35.144	205.215

*Corresponding to about twice the amount of common (crystallized) commercial borax.

This water is very remarkable for the complexity of its composition; and in the large amount of borax it contains it differs from any known to me, now in medicinal use.

ANALYSIS OF ASH OF PEAT.

This "peat" differs materially from the substance ordinarily so called, in that it is not the result of the long continued growth of the Peat Moss (*Sphagnum*), but is made from a many years' accumulation of the roots of the tule (*Scirpus Lacustris* and *Typha Angustifolia*) in the boggy flats that border the San Joaquin River, near ———, San Joaquin County, by the "California Peat Fuel Manufacturing Company." The mass is first pulped by machinery, and then pressed into bricks, which after drying measure about four by twelve inches. These are composed partly of undecayed tule roots, cemented by the decomposed portion into a mass of sufficient firmness to be handled and used like wood or coal. It seems to have found considerable acceptance for boiler fires, and the like.

The object of the analysis was to ascertain whether the ash, now obtained in large quantities, would be available as a manure. It was found that the ash specimen furnished, which was the product of the joint use of the peat and coal in a boiler fire, consisted largely of fused globules of a slaggy aspect, and would on that account not furnish results fairly applicable to the peat ash alone. A quantity of the latter was therefore incinerated especially for analysis, with the following results:

Hygroscopic moisture in the raw peat.....	18.78 per cent.
Amount of ash in the dried peat, free from moisture.....	18.567 per cent.
Amount of soluble salts in ash.....	1.230 per cent.

Analysis of Ash (Carbonic Acid deducted).

Silica	{ Insoluble, (part sand).....	49.18
	{ Soluble in carbonate of soda.....	15.94
Potash	.....	0.43
Soda	.....	0.49
Lime	.....	11.00
Magnesia	.....	2.41
Manganese, brown oxid	.....	0.11
Iron peroxid	.....	5.07
Alumina	.....	10.51
Phosphoric acid	.....	1.35
Sulphuric acid	.....	3.13
Total	.....	99.62

The amount of agriculturally useful ingredients, viz., potash, phosphoric acid and lime, shown by this analysis, is altogether too small to entitle the ash to much consideration as a soil improver, although it may be usefully employed where it is produced, especially on heavy soils. It is not as inert as the ash of coal, and of common peat; but a comparison of its ingredients with those of the ash of the growing tule shows that most of the plant food has in the course of time been leached out, doubtless to be used over again in the new tule growth.

This analysis forcibly suggests that the tule soils formed chiefly out of the ash of the tule roots, while profusely fertile at first, are liable to be seriously injured by the leaching-out of their soluble ingredients, unless protected from overflow. Heavy rains, also, would seem to be likely to produce a similar effect, or at least the removal of the alkaline ingredients from the surface down into the subsoil. The only practicable remedy would be the intermixture of the ash with as much of a clayey and retentive subsoil as may be readily reached by the plow.

As no specimens of tule soils have as yet reached the department, it would not be profitable to dwell farther upon these points at present.

ANALYSES OF ROCKS, ETC.

1. *Indurate Clay*, from the neighborhood of Santa Rosa, Sonoma County; sent by Mr. G. W. Whittaker, who says that the sample sent is the finest found, some being quite coarse-grained; that it crops out on the hillsides, and is somewhat used for building purposes. The material is of a light creamy white color, easily cut with a knife, and not at all disposed to crumble. It is remarkably light, so as to float on water for a short time, until it becomes water-soaked. It scarcely soils the fingers, but can be used for writing like chalk. On crushing it in water it becomes plastic, and would doubtless form a good material for fine pottery or queensware. On boiling for twelve hours and separating the true clay by decantation, there remains a fine siliceous powder, forming about thirty-three per cent. of the whole, which consists almost exclusively of the minute tubular shells of baccillaria. In the sixty-six per cent. of clay there are small amounts of lime and magnesia, but so little as scarcely to impair the quality of the substance as an excellent fire-proof material, and an unusually good non-conductor of heat; therefore suitable for linings of stoves, etc., as well as, when properly treated, for the manufacture of fire-brick. As an infusorial earth, it is remarkable for containing almost

alone a single species of shell, viz., *Baccillaria*, with only here and there a *Navicula*, of two species.

2. *Impure Limestone, or Marlstone*, from the neighborhood of Martinez; sent by Dr. J. Strenzel. This rock is of a yellowish-white tint, somewhat resembling chalk in aspect and hardness, but yet too compact to make a distinct mark on a board. It occurs abundantly in the neighborhood of Martinez, and northward toward San Pablo Bay; varies greatly in its nature and hardness, some being richer in lime than the sample analyzed, while at some points the clayey ingredient predominates altogether. It doubtless belongs to the cretaceous formation. The analysis gave:

Insoluble residue.....	12.34
Carbonate of Lime.....	70.89
Carbonate of Magnesia.....	10.59
Oxid of iron, and Alumina.....	1.14
Water and organic matter (by diff.).....	5.04
Total.....	100.00

A fair quality of lime for building purposes can be burnt out of this rock; the lime would possess slightly hydraulic properties, and if made up in quantities not too large at a time, the mortar would doubtless become exceedingly hard. For agricultural purposes the lime would be excellent; and where the rock itself can be obtained in a pulverized state, it would form a good dressing for the heavy adobe soils.

ANALYSES OF COMMERCIAL MANURES.

1. "*Ward's Superphosphate*."—This article was obtained from the San Francisco market, where it was offered at the rate of fifty dollars per ton. Prior to ascertaining its composition, it was used in the culture experiments of 1875-6, on the "superphosphate" plots.

The article is a grayish-white powder, full of glistening particles, and feeling very damp.

Commercial Statement of Analysis.

	Percentage.	No. lbs. per Ton.	Value of am't in a Ton.
Soluble phosphoric acid.....	2.20	44.	\$6.60
Reverted phosphoric acid.....	.36	7.2	.72
Insoluble phosphoric acid.....	6.30	126.	7.56
Nitrate of Sodium (Chili saltpetre).....	10.99	219.8	13.18
Sulphate of Potassium.....	.54	10.8	.46
Sulphate of Sodium (Glauber's salt).....	29.09	581.8	2.90
Gypsum.....	15.85	317.1	1.58
Chlorid of Sodium (common salt).....	.28	5.6	.10
Water.....	16.19	323.8	0.00
Total.....			\$33.10

This is one of the many low-grade superphosphate manures, which the absence of State supervision of this very tricky class of merchandise, still allows a place in the general market. That it should be thought feasible as a business transaction, to ship such an article to the other side of the continent from the point where it was com-

pounded, shows the unbounded confidence of the manufacturer in the helplessness of the prospective consumers. The valuation, as given above, low as it is compared with the price asked, is still too high in this: that while sulphate of sodium or salt cake, may be worth a cent a pound in commerce, it is practically of no value at all to the farmer, and has been added merely to increase the total weight by nearly one third. The other ingredients being here taken at their highest valuation, and the "insoluble phosphoric acid" being present in the shape of bone charcoal, in which form the substance is practically inert: the fact is that twenty-five dollars per ton would be a high price to pay for this article. The very small effect produced by this manure in the culture experiments of 1875-6, is thus also readily explained.

2. *Phosphate Manures*, manufactured by Messrs. Ohlandt & Co., Potrero, San Francisco.

This establishment was visited for the purpose of ascertaining what progress had been made in the manufacture and use of phosphate manures on the Pacific Coast; and specimens of the articles were courteously furnished by the proprietors. The latter state that there is scarcely any demand for such fertilizers here, and that they ship their products mainly to Australia and New Zealand. They manufacture both bone meal and superphosphate, but for want of a market, chiefly the former. This is prepared in the most approved manner, by steaming the bones; which process not only renders the bones so friable as to be much more readily and finely pulverizable, but is also well known to increase materially the efficacy of the meal as a manure. The article supplied for experiment at the University was of excellent quality, and strictly pure. The unfavorable conditions during the last season have prevented the realization of the well-known favorable effects of this fertilizer, which when properly used is scarcely second to superphosphate in its action.

The *Superphosphate* manufactured by the firm, from the offal of the bone charcoal furnished the sugar refineries, had been on hand for a year, and thus a large part of the four per cent. of soluble phosphoric acid originally contained, was in the "reverted" condition, making it somewhat low grade, yet considerably higher than "Ward's," above discussed. To the suggestion that it would be desirable to begin at once the manufacture of the highest grade superphosphates, to be sold by assay, as is done in the East and in Europe, the firm reply that they are ready to do so, so soon as a reasonable demand for such products shall arise.

It can hardly be questioned that the hauling of common stable manure from the city stables to the truck gardens outside of the city very frequently renders that manure much more expensive than would be an amount of high-grade superphosphate producing a corresponding commercial result. It cannot be long before this will be understood, and the shipping of our phosphates to Australia replaced by sales in the home market. I cannot help thinking that if a first-class fertilizer of this kind, sold by assay of actual value as are other products, were to be had in the San Francisco market, it would soon come into use, and that a most profitable industry would thus speedily be created. Wherever crops producing a high value per acre (such as the fruits of California) are prominent in culture, the introduction of the use of concentrated commercial fertilizers to increase and improve the products, cannot be long delayed.

ANALYSES OF SUGAR BEETS.

The value of beets for the manufacture of sugar depends not only on the amount of crystallizable sugar they may contain, but also, and very materially, upon the substances with which the sugar is associated in the juice, both as to quality and quantity.

A large amount of mineral salts is always objectionable, because, in the evaporation of the juice, these salts tend to convert the crystallizable sugar into syrup sugar (molasses), which in the case of beets is unsaleable, and therefore a dead loss. Moreover, the larger the amount of molasses present, the more difficult and costly is the purification of the sugar.

The value of beets is therefore estimated by the manufacturer, not only according to the percentage of sugar, but also with regard to the proportion between the sugar and "non-sugar;" which proportion, expressed in percentage of the solid contents of the juice, constitutes what is termed the "purity-coefficient." A high percentage of sugar in the beet juice, associated with a large amount of "non-sugar," may, nevertheless, prove less profitable to the manufacturer than a juice less rich in sugar but proportionally purer. The exact extent to which this consideration holds, depends somewhat upon the local prices of labor and fuel; but it is usually held that a beet juice whose purity-coefficient is below seventy-five per cent., cannot be profitably worked.

Much, however, depends upon the nature of the matters associated with the sugar in the juice. Gummy and albuminous substances may, in a great measure, be gotten rid of in the clarification with lime, and the same is true of some of the salts. But when these salts are of such a nature that, in the clarification, there is a formation of potash or soda lye, their effect is very injurious, even in small quantities. While these salts vary more or less in accordance with differences of soil, the general rule is that a juice yielding on evaporation and burning to ashes, more than about three-fourths of one per cent. of ash, cannot be profitably worked for sugar under ordinary circumstances.

It is thus easily seen that a chemical examination of the quality of the beets grown in any particular district, is of the most vital importance in enabling us to forecast the probable profitableness of the manufacture of beet sugar. To establish a beet-sugar factory without first ascertaining the quality of the beets that can be grown within convenient reach, would be no more reasonable than to build furnaces at random, trusting for the ore to turn up somewhere.

In judging of the results of the analyses given below, it should be kept in mind that *12 per cent. of sugar in the juice* is about the average richness of the beets used in sugar manufacture.

1. *Analysis of Sugar Beets* sent by Mr. D. F. Newsom, of Newsom's Springs, San Luis Obispo County. They were grown in the bottom of the Arroyo Grande. Lot No. 1 was ninety days from the seed; No. 2, one hundred and twenty days. Received August 4th, 1877.

Rather small in size, few weighing over two pounds. (Small but mature roots are preferable to large ones.)

Lot No. 1.—Juice pressed from four beets representing a fair average, showed a specific gravity of 1.051, corresponding to 12.6 per cent. of solid matter. (See analysis of No. 2.)

The saccharimeter showed (by polarization) this juice to contain

8.44 per cent. of cane sugar. This makes the purity-coefficient equal to only 67 per cent.

This juice is, therefore, too poor, as well as to impure, to be profitably worked for sugar, by the above determinations alone.

The solid residue obtained by evaporation of the juice (12.6 per cent.) left, on burning, 1.363 per cent. of ash—a very large amount, being nearly twice as much as practice has shown to be admissible for profitable working.

Lot No. 2.—One hundred and twenty days from seed. Average somewhat larger than the preceding lot.

Specific gravity of juice, 1.057—corresponding, by the tables usually used, to 14 per cent. of solid matter. Actual determination gave 14.32 per cent., justifying the assumption made in analysis of Lot No. 1, where no direct determination was made.

This juice clarifies more readily than that of No. 1, and, on evaporation, the syrup granulates much more readily, although yet with difficulty. On burning, it yields 1.14 per cent. of ash; still exceeding by 0.39 per cent. the practically admissible quantity.

The direct sugar determination of this lot was accidentally lost. On the most favorable assumption, however, it could not have exceeded 10 per cent.; being still considerably below the average. In addition thereto, it contains too large an amount of ash, and that of a pretty caustic character, as is seen by the analysis given below of the part of the ash soluble in water, which amounts to 91.36 per cent. of the entire ash:

Composition of soluble part of Beet-juice Ash.

	In 100 ash.	In 100 juice.
Potash	22.34	.232
Soda	14.59	.152
Phosphoric acid	6.25	.065
Sulphuric acid	3.50	.036
Chlorid of Potassium	36.52	.379
Carbonic acid and loss	16.80	.175
Total	100.00	1.039

A simple discussion of these results leads to the conclusion (which was verified by the alkalimetric method) that after clarification of the juice with lime, nearly a quarter of one per cent. of caustic soda will be present in the juice; which amount, according to the best experiments, would, in the evaporation, render eleven times that amount, or 2.75 per cent. of the sugar present, non-crystallizable; thus leaving only 7.25 as the best possible result of manufacture. This is economically out of the question.

Lot No. 3.—Upon communicating the result of the foregoing examination to Mr. Newsom, another lot of beets was forwarded by him, eighty days from the seed. Received September 20th.

Specific gravity of juice (by spindle), 1.053; corresponding to 13 per cent. of solid matter, by table.

The polarizing saccharimeter gave 9.85 per cent. of cane sugar.

Ash of juice, 1.17 per cent.

These results agree very closely with those of Lot No. 2, and would seem to show that the crop grown later in the season contains, at the

same age, a larger amount of sugar. (See analysis of Lot No. 1, ninety days from seed.)

Nevertheless, the conclusion is inevitable that, at present, the soil of the Arroyo Grande bottom will not produce beets adapted to the manufacture of sugar. This does not, however, prove that it may not become better adapted after some years of culture. Fresh land rarely bears a beet poor enough in salts; but, as the latter become exhausted, the quality improves. In any case, it seems well worth while to try to find a soil that *will* produce beets of the right composition, in a climate where, as Mr. Newsom remarks, three crops can be grown in one season.

2. *Analysis of Sugar Beets* grown near the sugar factory at Isleton, Sacramento County. These beets were forwarded by Mr. F. A. Roc, the President of the company, September 26th, and reached me two days after. Their firm flesh and crispness at once distinguish them from those previously examined; they yield their juice more readily and abundantly, and the taste of the latter is purer and less "herby."

Specific gravity of juice (by spindle) is 1.066, corresponding (by table) to 16.1 per cent. of solid matter. Direct determination gives 17.51 per cent. The residue granulates at once, and is much lighter colored than was that of the Arroyo Grande beets. By the polarizing saccharimeter, the sugar percentage in the juice is 14.7 per cent. Total ash percentage in juice, 0.58 per cent. Of this ash, a little less than two-thirds only is soluble in water; showing a very small percentage of the alkaline salts, which are chiefly injurious in sugar manufacture. The alkalimetric test shows that in the lime-clarification there may be formed not exceeding 0.11 per cent. of caustic soda, which in the evaporation will transform into molasses about 1.2 out of the 14.7 per cent. of sugar; leaving 13.5, or (in consideration of the other ingredients present), say 13 per cent. of sugar to be utilized by the manufacturer.

The purity-coefficient is 84, being 17 higher than that of the Arroyo Grande beets. But the "non-saccharine" matter is here chiefly such as will be removed by the lime-clarification process, such as gum, albuminoids, etc. A closer investigation of these ingredients will be made hereafter.

The beet pulp, completely leached with water and dried, amounted to 4.1 per cent., being about the usual proportion. On burning it yielded 2.93 per cent. of its weight of ash, equal to 12 per cent. of the weight of whole beet.

The detailed analysis of the juice and the pulp were not completed in time for insertion here.

It thus appears that the Isleton factory has been most fortunate in the selection of its location, since the beets produced on the spot prove of such unusually high quality, both as to percentage of sugar and purity of the juice.

GRAPE SYRUP.

The specimen was furnished by Mr. H. Logan, of the University, it having been sent to him from St. Helena, Napa County, for examination as to the possibility of preventing the separation of the grape sugar, whereby the whole becomes solid, or at least a thick paste. In this condition it is not considered a very merchantable article. When received the sample had but a slight sediment of grape sugar, but after some weeks the whole appeared solid.

The method of manufacture could not be definitely learned, but it is presumable that the grape juice was clarified with lime before evaporation. The color was light brown, taste pleasant, but without any distinct grape flavor. The syrup dissolved in water perfectly clear, and addition of alcohol gave no precipitate either of gum or albuminoids.

Specific gravity	1.385
Water remaining	20.80 per cent.
Amount of ash	1.014 per cent.

This ash consisted mostly of phosphates of potash and soda, the rest being phosphates of lime and magnesia.

The syrup is slightly acid, to an extent corresponding to the presence of 0.29 per cent. of sulphuric acid. The sample being small, the nature of the acid was not determined. It would be interesting to know whether it was a remnant of the natural acidity of the grape, or formed in the evaporation after the clarification.

As regards the means of preventing the solidification of the grape sugar, it should be kept in mind that in the usual mode of preparing grape sugar from must, it is prescribed to "neutralize" the acid of the juice with lime, in order to prevent its action on the grape sugar, by which the latter is gradually (or in boiling, more rapidly) transformed into "syrup sugar," or levulose. The more acid the juice can be allowed to remain, consistently with proper clarification, the less liable will it be to solidify afterward. The color of syrup made from *acid* juice will as a rule be darker, but its taste and flavor will nevertheless be more agreeable than when boiled from juice completely neutralized by lime.

It is however scarcely to be supposed that the objection of consumers to the pasty condition of well-flavored grape syrup will be permanent. When the quality of the article is once well understood, and a taste for it established, both consistence and color are likely to be disregarded in this, as they are in so many other articles of diet.

EXAMINATION OF LIBERIA COFFEE.

As it seems probable that the *true* coffee tree will hereafter take its place among the orchard trees of southern California, it is of considerable interest to determine, as rapidly as possible, which of the several varieties of coffee now known to commerce is likely to produce the best results, both as to quantity and quality, and general adaptability to the climate.

The young coffee trees now growing in several localities in the State, are all, so far as I am aware, of the Mexican and Central American varieties. It seemed desirable to test alongside of these the new kind, but lately brought into market from Liberia, whose qualities have been greatly extolled. A few pounds of the raw and parched coffee, as well as of the seed, was obtained from Messrs. E. S. Morris & Co., of Philadelphia, from whose Liberian plantations the article now in commerce is chiefly derived. The seed, unfortunately, has resisted all efforts to make it germinate, and a new supply has been ordered.

The grain is very large, averaging larger than the Java coffee, and most resembling that of Martinique; it is, however, even more irregular in form, the grains being mostly one-sided and twisted, and

invested with the silvery pellicle, which comes off in parching. The commercial parched article was found, as usual, to be considerably under-done. The highest flavor of the Liberia coffee seems to be developed when parched just to the beginning of "sweating," and then cooling it rapidly. This gives it a dark chestnut tint, and it has lost 18 per cent. in weight; while its bulk has at the same time increased 62 per cent.—*i. e.*, 100 cubic inches increase to 162. This is a greater increase than any coffee known to have been tested in this respect; and since in the household the parched grain is always *measured* for use, it will to that extent be more economical than Rio or Costa Rica coffee, whose greatest increase in bulk is from 30 to 35 per cent. At the same time, for equal bulks thus taken, the beverage, properly prepared, has a body fully equal, and an aroma decidedly superior, in the case of the Liberia product.

In order to withdraw the question from the field of individual judgment and taste, the amount of extract taken up by water from the parched Liberian grain was determined. It was found to amount to 35.5 per cent., which is about the average of the Martinique coffee, while that of Mocha (having the least body, but the highest flavor), yields only from 22 to 25. But the flavor of the Liberian coffee is nearly, if not quite equal, in my estimation, to that of the Mocha; so that, take it all together, it seems to combine more advantages than any other commercial variety of coffee. I say commercial, because the rarer and high-priced products of Mexico and Central America have scarcely been investigated sufficiently for comparison.

There is one point in which the Liberian grain differs essentially from that of Martinique: the extract of the latter, when burnt, leaves from 17 to 19 per cent of ash; that of the Liberian, only 11.

The amount of the active substance, *caffeine*, in Liberia coffee, has not as yet been determined. Judging from its effect, I think it probable that it contains less than the South American coffees, and would therefore not affect the nervous system so much as the latter.

It is desirable to continue the investigation of the various coffees of commerce, with a view to a more definite determination of their peculiarities than has as yet been made.

It is intended to distribute the young coffee trees, when of sufficient age, to various points in Southern California, in order to test their adaptability to the climate, as well as the quality of the product, as soon as possible.

EXAMINATION OF THE SO-CALLED "CALIFORNIA COFFEE," THE SEEDS OF RHAMNUS (FRANGULA) CALIFORNICA.

The seeds of the California buckthorn have for several years past been spoken of as a possible substitute for true coffee, and some persons have strongly insisted upon its intrinsic excellence. The following examination was undertaken with a view to determine whether or not the idea had any good foundation in fact. The shrub seems to be especially abundant in the foothills of the Sierra Nevada, and the berries received from that region are a good deal larger than the fruit usually becomes in the cañons of the Coast Range. The seeds, also, are larger and more plump. The berry may be said to vary from the size of a small cherry to that of a pea; when ripe it is bluish black, with a soft purplish pulp inside, inclosing two seeds

resembling grape kernels much more than grains of coffee, but placed, like the latter, facing each other with their flat sides. It is this superficial similarity which doubtless led to the thought that the plant was related to the true coffee tree. But, unlike the coffee seed, these grains consist of a thin husk with a soft kernel inside, which readily mashes between the fingers, and is very palpably oily in its nature, quite unlike the horny texture of all coffee.

Several small samples were received from different parties, but one of several pounds, sufficient for a full examination, was supplied by Mr. S. B. Hitchcock, through the *Rural Press* office. According to his account, the trouble and difficulty of gathering alone would make the product a very costly one.

A small lot of berries, pulped and the seeds washed out, yielded 22½ per cent. of the dried seeds.

Half a pound of seed was carefully parched, in a drum parcher, to a chestnut-brown tint. No aroma resembling that of coffee was perceived at any stage of the process; but toward the end a very lively evolution of a white smoke took place, with an unequivocal stinging odor of frying grease. The seed so treated had lost a little over 9 per cent. in weight, and had *shrunk* 8½ per cent. in bulk. True coffee, under the same circumstances, would have lost 18 per cent. in weight, and would have *increased* from 35 to 50 per cent. in bulk.

The infusion of the roasted seeds resembled in taste that prepared, during the late war, from roasted peanuts.

The seed kernel, pressed on paper with the finger, at once produces a grease spot. On extraction with solvents, it yields 32 per cent. of a dark colored oil, of a faintly aromatic taste, and non-drying. True coffee yields, at most, 10 per cent. of fat.

On burning, the buckthorn seed leaves 2.5 per cent. of ash, of which about one-fifth is soluble in water. True coffee contains between 6 and 7 per cent. of ash, which is very largely soluble in water, and adds materially to the nutritive qualities of the beverage. True coffee contains about 4 per cent. of tannin. The buckthorn seed contains not a trace of that substance.

After the extraction of the oil from the raw seed alcohol extracts about 8, and thereafter water about 9 per cent. of soluble matter. Among these soluble matters is an interesting substance which, while colorless at first, soon absorbs oxygen from the air, and is thereby converted partly into a dark substance nearly insoluble in water and alcohol, partly into a coloring matter (doubtless the same as that contained in the pulp), which dissolves in ammonia water with a beautiful purple tint, and imparts to cotton fiber, without any mordant, a handsome maroon color, which seems to be quite fast. Were the material more available, it would doubtless come into use as a dye-stuff, as is the case already with several other members of the buckthorn tribe.

The buckthorn seed is thus shown to differ from coffee in its chemical properties as much as it does botanically; the only point of resemblance being that both fruits are two-seeded berries.

EXAMINATION OF THE LEAVES OF SUMAC (*RHUS INTEGRIFOLIA*, AND *RH. LAURINA*?) FOR TANNIN.

Several samples of the leaves of the South Californian sumac have been examined for the amount of tannin contained in them, with a

view to their introduction for the preparation of the finer grades of morocco and other light leathers, for which purpose large quantities are now imported from Sicily.

The former of the two species above mentioned grows abundantly near the sea shore, from Santa Barbara south, forming dense thickets of considerable extent. Two samples of the leaves of this species (identified from leaves and fruit) were forwarded by Mr. J. Anderson, of Orange, Los Angeles County.

The first sample, collected probably in April or May, was pulverized when received; had a decided, but not unpleasantly strong odor.

The tannin determination (made by means of a standard glue solution) gave for this sample 4.63 per cent. of tannin.

Another sample was received from Mr. Anderson toward the end of September; the leaves were whole, and had a very intense and disagreeable odor; unripe fruit accompanied the leaves. On extraction with water the latter yielded 11.84 per cent. of tannin.

Another specimen was received from Mr. H. C. Hicks, San Diego County, through Dr. F. C. Cook, of San Francisco. It was so finely pulverized that it was not evident whether it consisted of leaves only, or contained also twigs. By an error in the first estimation, its tannin was determined at only a little over 6 per cent., but, on re-determination, was found to contain 11.64 per cent. of tannin, or the same as the second sample sent by Mr. Anderson. Whether this sample is from the same species of sumac as the other, I have been unable to ascertain; its odor is different, and it may possibly represent the sumac of the valleys, with large panicles of flowers (*Rhus laurina*).

The whole subject requires farther and more accurate investigation, especially as to the best time of gathering, and as to whether or not the smaller twigs may advantageously be included in the commercial product.

The best Sicilian sumac contains from 16 to 19, the Spanish, Virginian, and other Southern sumacs, 10 to 12 per cent. of tannin. The California sumac would thus take a fair stand among the sumacs of commerce, even if its percentage could not at any time be found higher than in the samples analyzed. As it now grows, and can be made to grow, on land suited to little else, it may become an article of considerable importance for Southern California.

The following investigations are in progress, but not sufficiently advanced for a report thereon:

Alkali soil from Curtis' ranch, near Stockton.

Soil from near Tomales, Marin County; sent by Mr. O. Hubbel.

Examination of seaweed, such as is thrown ashore near Pescadero, as to value of ashes, or as manure.

Examination of "loco weed" (so called, it seems, without positive knowledge that it is injurious—it being a lupin), from near Tehachipa, Kern County. It is very desirable that samples of "loco weed," dried green, and with authentic information as regards its effects on cattle or horses, should be sent from the various sections of the State, for investigation, and the possible finding of an antidote.

Examination of the grapevine black-knot (now becoming frequent in the Sacramento Valley), and its fungus parasite.

A large number of minor examinations, and analyses of soaps, yeast powders, toilet articles, etc., exhibited at the twelfth Mechanics' Fair at San Francisco, were made conjointly with the Department of Chemistry, but are reserved for a future report, in connection with farther investigations on the same subjects.

APPENDIX B.

Report of the Professor of Mechanical Engineering.

BERKELEY, November 2d, 1877.

To the President of the University of California:

SIR: I have the honor to submit the following report: In referring, as a continuation of some remarks on a former occasion, to the character of my course, I deem it proper to call your attention to such existing conditions, which, being necessarily connected with our growing University, have largely influenced and shaped the scope and nature of the course so far followed in the College of Mechanics.

Considering the terms of admission, and the many studies comprehended in a general culture course, during the first two years, it will be justly considered natural that several important preliminary studies have found no place in the schedule of exercises. In making this statement I refer exclusively to the scientific course, as relating to those colleges which are directly connected with the exact sciences. Whether the remedy is to be found in a post-graduate course, or otherwise, is not the objective point at present, but I wish to direct attention to the absolute necessity of embracing in my course certain preliminary studies, including, as one of the most essential, analytic mechanics, which bears to mechanical engineering the same relation as chemistry does to chemical technology.

The, perhaps, unfortunate preface, "industrial," has given rise to a wrong interpretation of what ought to be termed mechanical engineering.

The present state of the applied science requires a clear understanding of the fundamental laws of mechanics and their relation to thermal application, as based on analytic geometry and calculus; without it a large portion, which is directly connected with application, remains obscure.

If we eliminate analytic mechanics let us be consistent and relieve our already overburdened schedule of that time-honored but useless appendage to our collegiate education, calculus, which had its origin in and finds its most important application in mechanical engineering.

It will be seen from the above that only a portion of the time allotted to the special studies can be made available; for this reason

I have eliminated all that part which properly belongs to mechanical technology, and which may be easily acquired, without an instructor, by the aid of an extended literature and by experience during transactions of business.

In my course I have been guided by the following considerations: In selecting, arranging, and presenting the various studies, I have not followed dogmatically any of the many excellent works in our possession, for the reason that we find generally, in a systematic course, a great deal which is not corrected with any especial application, nor adapted to assist a clear understanding of the fundamental principles on which it is based.

Again, methods followed from a purely scientific standpoint are very often not those to be chosen in connection with the applied sciences. For this reason I have used either analytic or synthetic methods, as best adapted for the purpose.

The course of instruction in the College of Mechanics, as commenced August ninth, eighteen hundred and seventy-seven, will be as follows:

1877 to 1878, First and Second Term.—Calculus commences with the beginning of the Junior year, which made a diversion from the general course necessary, during the first half-term, in substituting such branches as could be given without its aid. Professor Welcker kindly assisted by arranging a separate and shorter course, so as to enable students to commence the regular course at the beginning of the second half of the first term.

In consequence, my original plan, which, among other changes, also avoided the rather unlogical division into statics and dynamics (we have equilibrium of motion), had to be abandoned.

The course consisted in the general laws of statics, frictional stability, outer and inner forces of structures, determination of strains in trusses, bridges, etc., by method of moments and graphostatics.

At the beginning of the second half of the first term the regular course of analytic mechanics was introduced. It may be sufficient to state that the course will be adapted mainly to the requirements of the College, and to answer as a basis for Thermodynamics.

Illustrations, examples, problems relating to engineering practice, will form a considerable portion of the course.

1878, First Term.—Will introduce Strength of Material and Hydraulics, Hydraulic Motors, and such subjects related thereto.

1878, Second Term.—Thermodynamics, including general laws, internal energy, thermal laws, heat engines, combustion, etc.

This leaves the course incomplete. The addition of a post-graduate year will be of no value without an increase of the force of Instructors.

I, therefore, most earnestly recommend the appointment of an Instructor, who possesses a practical knowledge of the details of machine construction and drawing, acquired by actual experience, to take charge of the construction room provided for in the new Mechanic Arts College.

I also direct the attention to the necessity of obtaining a liberal supply of drawings, diagrams, and plans, relating to machine construction, etc., for the use of the College of Mechanics.

Respectfully submitted,

F. G. HESSE,
Professor of Mechanical Engineering.

APPENDIX C.

BERKELEY, CALIFORNIA, May 30th, 1877.

PRESIDENT LECONTE:

DEAR SIR: I have the honor to submit the inclosed report of the department in my charge.

Your obedient servant,

G. F. BECKER.

ANNUAL REPORT OF THE COLLEGE OF MINES.

Special instruction in this department began in the autumn of eighteen hundred and seventy-five, with a class of three students, afterwards increased to four. In the autumn of eighteen hundred and seventy-six the number of mining students receiving professional instruction reached seventeen. The number and the rate of increase give an excellent indication of the demand among the young men for education in this direction. Of these seventeen students, two were special students and three were post-graduates, the first, I believe, in any department of the University. It is reported that at least four of the members of the Senior Class will remain at the University for the post-graduate course.

A portion of the students in the Department of Civil Engineering attended the course on Iron this year, at the request of Professor Soulé, and the mechanical engineers were only prevented from doing so by lack of time. Professor Rising is making arrangements for the chemists to attend, in future, either the lectures on General Metallurgy, or those on Agricultural Chemistry.

Instruction and the facilities for instruction are still very incomplete. The course on metallurgy and mining comprises some two hundred and twenty-five lectures, besides laboratory instruction in assaying, all given by a single teacher. It might be thought that this was a somewhat extensive course, but it must be remembered that mining engineering is the most complex of all the mechanic arts, involving almost all the rest. The mining engineer must be a mechanical and civil engineer, as well as a geologist, a mineralogist, and especially a chemist, and the superstructure of the special application of these sciences must be as broad as the foundation.

These general considerations may serve to explain to those unfamiliar with the subject the fact that, in order to avoid being super-

ficial, as well as elementary, I have found it necessary to omit many important branches. Thus, ore-dressing, casting, and electro-metallurgy cannot, under the circumstances, be touched upon; neither can mining and metallurgical machinery be properly handled, either by the Mining Department, or by that of Industrial Mechanics, for lack of time.

The course, as thus far given, includes, under the head of metallurgy—(general metallurgy, chemical and physical properties of the metals, fuels, refractory material, furnace construction, blowing, and other machinery, hot-blast stoves, slags, etc.); and the special metallurgy, including assaying and laboratory demonstrations, of lead, silver, gold, quicksilver, copper, zinc, and iron. Instruction in mining includes the occurrence of ores, prospecting, opening and exploitation of mines, timbering, transportation, ventilation, and drainage.

The course could be made more complete either by prolonging it, or by adding to the force of instructors. The former method seems impracticable. As at present arranged, the lectures extend over two and a half years, beginning in the second term on the Junior year, and two years of post-graduate study are necessary to obtain the degree of mining engineer. The course cannot be commenced earlier, because the students are not sufficiently advanced in chemistry, mathematics, and other branches, before the middle of their third year to enter upon special topics to any advantage. Neither can the period of instruction reasonably be prolonged, for we cannot hope to retain the students more than six years at the University. The only practical method of making the courses of lectures at once thorough and complete is, therefore, to add to the staff of instruction.

With respect to the accommodations for the department, they are at present of the most meager description, but will become ample on the completion of the new building designed to accommodate the Departments of Industrial Mechanics and Mining.

Apparatus, books and drawings for instruction in mining engineering the University can scarcely be said to possess. Apparatus is represented by a few portable assaying furnaces and a small collection of furnace models; the library consists of a few incomplete sets of United States Reports, a portion of the *Annales Des Mines* reaching to eighteen hundred and sixty-four, and some few other volumes, a part of them of little or no value. All that the University possesses in the way of drawings is a score or so of tracings which some San Francisco manufacturers have lately had made, in the kindest manner, at the solicitation of the department.

As it is notorious that the University is not at present in a position to undertake any development implying expenditure, it may perhaps be not improper to call attention here to the immense future importance of the mining school of the University. The importance of the mining districts west of the Rocky Mountains to the whole world as well as to California is notorious everywhere, and is a fundamental fact of the prosperity and of the origin, if not of the present existence of this community. The natural center of education of this vast mining territory is the University of California, and if a thoroughly efficient mining school were established here, it is not too much to say that in the course of a few years the direction of the greater part of the vast interests involved would fall into the hands of graduates of the school, to the honor of the University and of the State, and to the benefit of those interested in mining property. At

no other place could engineers be so effectually instructed in the special and exceptional methods and conditions prevailing in this district. Schools on the other side of the continent, or in Europe, are too remote, and situated in immediate proximity to mining districts too radically different from this to draw inspiration from our conditions. They are consequently less able to educate men fitted to cope with the problems they will encounter in this field than is the University of California, provided that it be supplied with a competent staff of instructors, and sufficient apparatus and material to impart instruction as solid and thorough as that given elsewhere.

In short, there is not a better or more important locality in the world (unless it be London) for a school of mines, and it is a matter of the utmost commercial and material importance to the inhabitants of California to found here a school for instruction in the economical extraction and treatment of ores second in facilities for general technical education to none, and far surpassing all others in regard to those specialities which are of peculiar importance to the western half of the continent.

The interests of mining education on this coast have thus far been confided to a single instructor, who, with the best will to do everything in his power to forward the cause intrusted to him, is of course unable to supply the place of the corps of teachers in the great mining schools of the world. Mining and metallurgy cannot be taught as they should be by less than three instructors, and there is ample work for four. There should be, moreover, connected either with the Mining Department or with that of Industrial Mechanics, an instructor devoted to the special machinery of mining engineering.

Books and drawings to the amount of three thousand dollars are needed to bring the library up to the proper degree of efficiency. An authorized and organized effort should also be made to obtain from manufacturers of mining machinery as many drawings and models as they are willing to supply. It is believed that, if properly approached, they would gladly furnish the University with a large amount of most valuable material at their own cost.

A considerable amount of apparatus will become necessary as soon as the new building is completed. Besides the cost of furniture, five thousand dollars will probably be needed to equip the building in such a manner that the resources of science can be effectually brought to bear upon the problems presented in the mechanic arts as represented by mining engineering.

A further most pressing need of the department is what may be called a "Practice Fund." The great complaint made against mining education in this country has been that it was not practical enough, and the complaint has been just. In Europe the necessity of practical experience, as well as mere book-learning for engineers, has long been recognized, and in the first lecture I gave at the University, nearly three years ago, I made a special point of this necessity. Since then a joint convention of the "American Institute of Mining Engineers" and of the "American Society of Civil Engineers" has unanimously decided two points, that a liberal culture is of the utmost importance to engineers, and that practical training is absolutely indispensable to success in the profession. It is the wish of the department that the vacations, and a large portion of the second post-graduate year, should be devoted to acquiring this practical experience, and it was announced in the last catalogue that its pos-

session would be essential for a degree as mining engineer. But many of the students are unable to pass the requisite period at the works or mills where they must acquire their experience without pecuniary aid. A small yearly sum is therefore most desirable to pay a portion of the expenses of deserving students while engaged in the manner indicated. A certain amount should also be appropriated to enable instructors in the department to visit mines and mills of interest. This would be desirable even if there were a well organized technical literature on this Coast—for observation is better than description—but at present observation is the only means of keeping up with the current changes and improvements with which it is essential that the instructors should be familiar. The instructors, however, cannot be expected to give up their vacations to this object, *and* to pay their own traveling expenses. It is believed that six hundred dollars a year would cover both these objects.

It may be mentioned that it is the practice of the department to give out subjects for theses of such a character that the student is enabled either to add new facts to knowledge or to give publicity to information hitherto uncommunicated. Matter for these theses is obtained either in the laboratory or at the establishments visited, and it is believed that by printing a large portion of these theses (all those which deserve it) the University will earn the gratitude of the technical and scientific public.

I append some notes on the coals of the coast by Mr. Christy, instructor in chemistry, and student in my department. The field expenses involved in these enquiries were, by the courtesy of the Agricultural Department, defrayed out of funds at its disposal.

G. F. BECKER.

REPORT ON MOUNT DIABLO COALS.

BY S. B. CHRISTY.

SOME NOTES ON THE COAL MINES OF MOUNT DIABLO, WITH ANALYSES OF THESE AND SOME OTHER COALS.

The coal of the Mount Diablo region is chiefly taken from two veins—the Clark and the Black Diamond. These veins lie about four hundred feet apart, are approximately parallel, and have a strike nearly east and west, and a dip from twenty degrees to thirty degrees to the north. These beds lie between beds of sandstone, which change into bituminous shale as they approach the vein. The roof frequently shows impressions of leaves and so forth. Between these larger veins are numerous thin sheets of coal, most of which disappear; but one, the “Little” vein, increases in size to the east until it is nearly as large and valuable as the Clark vein itself.

I visited and obtained samples of coal and other specimens from four different mines, proceeding along the veins from west to east, as follows: Black Diamond, Union, Pittsburg, and Central. These mines are situated at distances of a mile or so from each other, and were the only ones at work at the time of my visit, two years ago. The Black Diamond vein was worked at the time of my visit only at the mine of that name, the rest confining themselves to the Clark and Little veins.

The Clark vein varies from three feet at the Black Diamond mine, to two feet or two feet six inches at the others. It is tolerably free from “bone,” and pretty uniform in character at all the mines. The coal from this vein has the following properties: Fracture, conchoidal, approaching cubical. That from the Central mine shows the least tendency to determinate fracture; luster, dull vitreous; color, black; hardness, 2.5 to 2.8; streak, brown; laminae of iron pyrites very prominent in the coal. Burns with a full, red, smoky flame, with a strong sulphurous odor. Ash, brownish red.

The Black Diamond vein is eight feet thick, but only four feet of this is workable coal. The remainder is slate and shale. The good coal lies between the shales, usually, a little nearer the top of the vein. This coal, while in many places of an excellent character, does not in general seem to be as free from thin partings of slate as that of the Clark vein. The fracture is not so conchoidal as the Clark, more irregular, and showing a tendency to laminar rather than cubical cleavage. It is brittle, and its luster is more brilliantly resinous. Color and hardness, as before. Its streak is brown, but darker than that of the Clark. It burns with same broad, smoky flame and sulphurous odor. The ash is gray.

It is said that the Clark vein coal catches fire the more readily, while the Black Diamond gives the more heat. Both crumble in the air and weather to a fine powder. Both ignite spontaneously when allowed to weather in large masses, because of the pyrites they

contain. It cannot be used in making steam, as it corrodes the boilers.

At the Union mine specimens of what the miners call "nigger-head" were obtained. This had every appearance of wood which had been partly silicified and partly changed into coal, while even the silicified part was impregnated with bituminous matter. In the fire this burned away, leaving the silicified wood whitened, and nitric acid had the same effect as the fire, causing only the slightest effervescence from carbonates. With much difficulty specimens of this were ground thin enough to be translucent, and a set showing longitudinal, transverse, and cross-sections, were presented to the San Francisco Microscopic Society. Under the microscope they prove the woody origin of the substance beyond a doubt, but its nature has not yet been botanically determined.

At the Pittsburg mine was found, in the roof of the vein, a mass of flattened, intertwined cords of some slaty material—the interstices filled with coal. These were evidently once filaments of mud, which were afterwards flattened out and dried by the same pressure and heat that acted upon the coal itself. The specimen is interesting, as showing the direction and amount of force at work in these localities, and was used for that purpose in a recent paper on "Mountain Formation,"* by Prof. Joseph LeConte. In the gangways of this mine were also found some interesting specimens of crystalized ferrous aluminic sulphates, caused by the weathering of the iron pyrites of the coal. It frequently appears as a coating upon the walls in various parts of these mines.

At the Central mine were obtained gypsum, and a fine clay from beneath the Little vein. The same clay is taken from a point more to the east, where it is more abundant, to supply the pottery at Antioch.

Mr. Stewart, the Superintendent of the Central, informed me that in prospecting for the extension of the Clark vein through the property under his charge, he found it at the surface scarcely thicker than a knife's edge; at the depth of two hundred feet it was only six inches wide; but, on persevering, he found it at last widened out to its usual thickness—two feet to two feet six inches—and, in places, even to four feet. He said that the coal had weathered to a depth of three hundred feet.

SELECTION OF SAMPLES.

No. 1. *Average from Clark vein.*—This was selected from the Clark vein, along "Mount Hope Gangway," by chipping pieces as large as an egg from top, bottom, and middle of the vein, at intervals of thirty paces for a distance of four thousand feet. Dust, infiltrations, and "bone" were avoided, and only exportable coal was taken. In this way one hundred and fifty to two hundred pounds were taken and carefully sampled down to get a fair average of the whole amount.

No. 2. *Average from the Black Diamond vein,* was taken along "Black Diamond Gangway No. 2," in the same horizontal plane as "Mount Hope Gangway." The operation was conducted in the same manner and for the same distance as the previous one.

* See Silaman's Journal.

No. 3. *Average of both veins.*—Dump of Black Diamond Mines.

No. 4. *Average of Union Mine.*—From dump.

No. 5. *Average of Pittsburg Mine.*—From dump.

No. 6. *Average of Central Mine.*—From dump.

Though the last four samples were carefully selected, it is evident that they do not represent, with the fairness of the first two, the character of these coals. It will be remembered that Nos. 1, 4, 5, and 6, are from the Clark vein. Each of these samples was powdered, mixed to make homogeneous, and kept in a tightly-closed tube.

METHOD OF ANALYSIS.

Experiments made on the proximate analysis of the coals (or the determination of water, volatile matter, fixed carbon, and ash) in platinum crucibles, heated by gasoline illuminating gas, were not found to give uniform results. Determinations were therefore made in the muffle furnace, with quantities of ten grammes, the temperature being raised as rapidly as possible, without risk of loss by spirting in consequence of the rapid evolution of gas.*

I give in Table I two sets of determinations of coke made in this way.

TABLE I.

COAL USED.	Coke (A).	Coke (B).	Difference.
Number one, Mt. Diablo.....	44.74	41.90	0.84
Number two, Mt. Diablo.....	46.82	45.55	1.27
Number three, Mt. Diablo.....	44.95	43.97	0.98
Number four, Mt. Diablo.....	44.85	43.64	1.21
Number five, Mt. Diablo.....	44.30	43.37	0.93
Number six, Mt. Diablo.....	44.21	43.10	1.11

It will be seen that determination (B) is uniformly smaller than (A). This arises from the fact that the muffle was slightly hotter in that case when the crucibles were added. But the variation, at the greatest, was only 1.27 per cent., in comparison with a difference of 6.62 per cent. by the other method, while another advantage of this method is, that it enables to one subject all the coals in the muffle to the same operation, and hence the results are strictly comparative, which is all that such an analysis can hope to be. The above results have been averaged, to give the coke from which the fixed carbon was determined, in the following table. The ash was determined by burning the coke in the muffler, in proper dishes, at a very low red heat.

* In cases where more accuracy is required, porcelain or platinum crucibles, imbedded in lime or magnesia, may be used, then cooled in dissicators, and weighed directly, thus avoiding long exposure to air, loss in transferring, etc.

TABLE II.

MT. DIABLO COALS.	Water.	Bit. Mat.	Fixed C.	Ash.	Coke.
No. 1 -----	10.46	47.22	35.04	7.28	Dull and incoherent. Not a coking coal at all.
No. 2 -----	11.58	42.23	36.90	9.29—Reddish brown.	
No. 3 -----	11.21	44.33	35.78	8.68—Reddish brown.	
No. 4 -----	12.19	43.56	36.33	7.92—Greyish brown.	
No. 5 -----	11.83	44.33	35.50	8.34—Red.	
No. 6 -----	13.11	43.23	34.14	9.52	

It is seen that the water in No. 1 of the Clark vein is less than that in No. 2 of the Black Diamond. There is no doubt of the figures, as they are the average of four determinations in each case. It can be accounted for, probably, by the fact that the gangway of the Clark vein had been longer open than that of the Black Diamond, and the coal had a better chance to dry. It will be seen that the Black Diamond has the greater amount of ash, as one would expect from the appearance of the coal in the vein. Also, as one would expect from its greater depth, the Black Diamond has the greater amount of fixed carbon, and therefore should give the greater amount of available heat as a fuel. It will be seen that No. 3 strikes very nicely the medium line between the two coals of which it is a mixture.

It will be interesting to compare the change which the coal of this region has undergone in developing it. On page 30, Vol. I. Geological Survey of California, are given four analyses, made of the coal from the mines called in the report Clark & Co., Black Diamond, Cumberland, and Peacock, respectively. These analyses have been averaged and placed in comparison with the average of Nos. 1 to 5, inclusive, of Table II. They are as follows:

	Water.	Bit. Mat.	Fixed C.	Ash.
Average in 1861-2-----	14.03 1-4	37.97 1-2	44.24	3.75½
Average in 1875-----	11.45 2-5	44.33 2-5	35.91	8.30 1-5

It will be seen that the amount of water has decreased 2½ per cent., as was to be expected. The coal from the Central (*i. e.*, Number Six) more nearly approaches that of Professor Whitney's samples. Number Six contained 13.11 per cent. water, a difference of only .92 per cent. from that of eighteen hundred and sixty-one and eighteen hundred and sixty-two. A second difference lies in the increase of ash, from 3.75½ to 8.30½ per cent. This, probably, lies in the selection of the samples. One of those given by Professor Whitney contains only .97 per cent. of ash, which could only happen with carefully picked specimens, and could hardly be true of any large quantity of coal. The bituminous matter and fixed carbon determinations can not be compared, as Professor Whitney gives no data as to the method of making these determinations. He promises more complete analyses in the volume on Economic Geology, which unfortunately has never appeared. There is a third change which is more

remarkable—that is the amount of sulphur. The Geological Survey Report contains this statement: “They [these coals] are also but little contaminated with sulphur, at least the better qualities are comparatively free from this deleterious material.” This is no longer the case, for the coal invariably is very thoroughly impregnated with the shining scales of iron pyrites. Its sulphurous odor has kept the coal out of our houses, and renders traveling disagreeable where it is used as a fuel. The explanation of this striking change lies probably in the action of the weather, as Professor Whitney remarks that the specimens were taken from “no very great depth.” The coal at the Central mine, several times stated to be nearer the surface, seemed, at least, to be less full of pyrites. Of course, this could be established only by analysis.

I give the results of analyses made of specimens of other coals obtained from various gentlemen, who were kind enough to present them:

Number One, from Livermore Pass.

Number Two, from a mine of Seattle Mining and Transportation Company.

Number Three, from a bag from one part of same mine.

Number Four, from a bag from another part of same mine.

Number Five, a single lump of fine looking coal, not a fair average probably, from Puyallup, Washington Territory.

Number Six, some of Mount Diablo Number One, used to check the work and give a means of comparison with these coals.

All except Number One, Livermore Pass, were determined by the muffle; Number One by the Bunsen burner. All were the average of two determinations:

TABLE III.

	Water.	Bituminous Matter.	Fixed C.	Ash.	Coke.	Properties of Ash.
No. 1..	18.48	36.39	32.08	13.05	Dull pulverent.	} Reddish brown.
No. 2..	12.67	38.43	43.25	5.65	Dull pulverent.	
No. 3..	13.32	38.09	45.74	2.85	Dull pulverent.	
No. 4..	13.15	38.24	42.08	6.53	Dull pulverent.	
No. 5..	2.59	41.79	53.67	1.95	Solid, metallic lustre.	Greyish brown.
No. 6..	Mount Diablo, No. 1.....			42.03		

Number Six, or Mount Diablo Number One, gives 42.03 per cent. coke, which lies just between the two determinations, 42.74 and 41.90 per cent. of Table I. The coal of Livermore Pass, it will be seen, is a very poor material. And while there seems to be more water in the Seattle than there is at present in the Mount Diablo, there is rather less ash and more fixed carbon. The Puyallup coal is remarkable as furnishing almost the only coking coal in the United States, west of the Rocky Mountains. If the rest of the coal averages anything like what this specimen does, it certainly will prove a valuable and useful coal.

S. B. CHRISTY.

University of California, Berkeley, June 18, 1877.

APPENDIX D.

DEPARTMENT CIVIL ENGINEERING, }
UNIVERSITY OF CALIFORNIA, September 3d, 1877. }

PROFESSOR JOHN LECONTE,
President of the University:

DEAR SIR: I have the honor to submit the following report upon the organization and present condition of the College of Engineering. The Board of Regents of the University, in the Fall of eighteen hundred and seventy-two, in accordance with an existing law of the State, entitled "An Act to create and organize the University of California," approved March twenty-third, eighteen hundred and sixty-eight, organized the College of Engineering, by appointing a Professor of Engineering, and such other Instructors from the existing educational staff as were necessary to teach a full civil engineering course; and, at the same time, adopted the proper curriculum of studies. From that time to the present, instruction has been uninterruptedly given to such students as have enrolled themselves in the College of Engineering, in the following studies:

First or Freshman Year—Algebra; Geometry; French or German; English Language, its History, Structure, and Composition; Chemical Lectures; Rhetoric; Drawing; Physiology.

Second or Sophomore Year—Trigonometry; Analytical Geometry; Chemistry; Physics (Heat); Botany; French or German; English Language; English Composition; Drawing; Mechanics; Zoology; Descriptive Geometry; Projections, etc.

Third or Junior Year—Land Surveying; Leveling; Topography; Road and Railroad Surveying and Building; Engineering Drawing; Mechanics; Zoology; Calculus; German or French; English Literature; English Composition; Mental Philosophy; Physics.

Fourth or Senior Year—Properties of Building Materials; Framing and Carpentry; Roof and Bridge-truss Construction; Foundations of Structures; Engineering Drawing; Astronomy; Physics; Geology; German or French; Linguistics; English Composition; History; Logic; Mineralogy; Preparation of an original thesis.

On the completion of the above curriculum, and the passage of the necessary examinations thereon, the engineering student is graduated with the degree of Bachelor of Philosophy (Ph. B.).

As will be seen by consulting the list of studies in the above course, special instruction in engineering begins only with the Third or Junior Year, the previous two years being necessarily filled with preparatory and liberal studies. The latter are also continued, in as far as will not interfere with the professional studies, during the remaining two years of the undergraduate course. An additional

amount of study upon the subjects of higher engineering, requiring from one to two years of extra time, will, upon successful examination, entitle the post-graduate student to the professional degree of Civil Engineer (C. E.).

It is intended that this professional instruction shall occupy most of the time of the candidate, in order that he may completely and thoroughly pass over the whole theoretical field of the subject, and become thereby fitted to occupy the position of assistant to an experienced engineer, in any one of the many branches of the art of engineering.

Since the organization of the College of Engineering, a large percentage of the whole number of students have enrolled themselves in it.

In eighteen hundred and seventy-three, four years after its establishment, the first class was graduated from this college. Out of a University class of twelve members, six were in the College of Engineering. In eighteen hundred and seventy-four, out of twenty-three graduates, there were eight; in eighteen hundred and seventy-five, out of twenty-five graduates, there were eight; in eighteen hundred and seventy-six, out of thirty, there were eleven; in eighteen hundred and seventy-seven, out of twenty-six, there were four. This list does not include a great number of students who received instruction during a part of the regular time, but were not graduated, nor those belonging to other colleges who were taught surveying, leveling, etc., in this department. There are at present in the University about forty students who are pursuing the Engineering curriculum. A special course of instruction in the theory of land surveying, leveling, etc., is given to the members of the Sophomore classes of the Colleges of Agriculture, Mechanics, Chemistry, and Letters.

A special course, with extended practice in the field, is also given to the Junior class in the College of Mines. It includes land surveying, leveling, topography, use of barometers and aneroids, and mine surveying.

Much time and care are expended in making the surveying and engineering course as practical as possible. Students are required to make a complete survey of a portion of the University grounds, to keep the usual field notes, and to plot and map them, exactly as would be done in ordinary engineering work.

The collection of surveying apparatus is excellent, and needs to be augmented by only a few instruments in order to make it practically perfect.

In the Constructive Engineering Branch, the nucleus of the collection of natural building stones, artificial stones, marbles, etc., timber specimens, wood artificially preserved, etc., has been made by the undersigned, but needs a large accession in order to make it complete.

A fine collection of models of roof and bridge trusses has been purchased in Darmstadt, by means of a liberal gift of money from Mr. H. D. Bacon, of Oakland, as also a large number of models illustrating the various joints employed in framing.

In joint possession of the Engineering and Drawing Departments, there is an excellent set of models of domes, arches, walls, curved and warped surfaces in masonry, and the various joints, bonds, etc., employed in stone and brick work. An appropriation of two thousand dollars is necessary to bring the collection of models, appara-

tus, etc., up to a perfectly efficient and practical standard, in order that the Instructor may teach through the eye as well as the ear.

A number of field or portable astronomical instruments, such as a transit, zenith telescope, chronometers, etc., used in geodetic surveying, is required for the instruction and practice of the civil engineering classes.

These instruments could well be combined with the apparatus of a physical observatory, already much needed by the University. A number of the more costly and valuable works and plates upon engineering structures of celebrity should be added to the Library. Instruction in Astronomy, comprising the ordinary College course, is at present given by the Professor of Civil Engineering. The usual problems arising in extended geodetic surveys, in the running of boundary lines, etc., are explained to the engineering students; but the entire absence of astronomical apparatus renders such instruction purely theoretical.

Besides the Professors and Instructors engaged in giving preparatory or general instruction to the students of this College, there are at present the following engaged in special work: Frank Soulé, Jr., Professor of Civil Engineering and Astronomy; John D. Hoffman, Instructor in Engineering Drawing; L. L. Hawkins, Instructor in Surveying Field Practice; John W. Bice, Assistant in Surveying. Mr. Hoffman also devotes a large portion of his time to the students of Mining and of Mechanics, and Mr. Hawkins to the Department of Mathematics.

Very respectfully yours,

FRANK SOULÉ, JR.,
Professor of Civil Engineering and Astronomy.

APPENDIX E.

PRESIDENT LECONTE:

DEAR SIR: I beg leave to submit the following statement in behalf of the Department of Chemistry:

The instruction given in this department has been of a two-fold character. It has consisted in an *elementary course*, proficiency in which is required of all students in the University before graduation, and in an *advanced* or more extended course, embracing general, theoretical, and analytical chemistry. This latter course, either in part or in whole, is preparatory to the *special* study of Agriculture, Metallurgy and Mining, and Applied Chemistry.

The number of students who received instruction in the elementary course, during the past year, was one hundred and fifty-four; the number in the advanced course was:

In qualitative analysis.....	47
In quantitative analysis.....	19
In attendance on lectures on inorganic chemistry.....	10
In attendance on lectures on organic chemistry.....	5

It is especially to be regretted that from lack of a suitable room, the large number of students in elementary chemistry have been deprived of the advantages of practical work in the laboratory, and I hope that provision may be made for them during the coming year.

The progress made by the different classes of students has been quite satisfactory. It is, however, very desirable that those entering this department should have a more thorough training in the *elementary branches*. More systematic habits of thought and study are requisite to the attainment of the highest success in this study.

The manufacture of re-agents for the use of the laboratories, which was begun two years ago, has been carried forward during the past year with great success. All the pure muriatic and nitric acids, and pure ammonia, and many other re-agents needed for the laboratories, have been prepared from commercial materials at a slight expense. The purity of re-agents thus obtained exceeds that of any to be found in the market. It is my intention to continue this work, and to extend it as rapidly as the needs of the department demand. This preparation of chemicals serves a double purpose; in the first place, pure and reliable chemicals are furnished to the laboratory far below market rates; in the second place, their preparation may be made a valuable means of practical instruction.

COLLEGE OF CHEMISTRY.

This College was established for the purpose of encouraging an extended course of study in the department of chemistry and allied

branches, by offering the degree of the University to those students who should complete the prescribed course of study in a satisfactory manner. A good number of students, from its first establishment, have availed themselves of its advantages, and, in this respect, it has since kept pace with the growth of the University.

Its organization is broad enough, and comprehensive enough, to develop into an advanced school of pure chemistry (organic and inorganic), on the one hand, and also into a great industrial school of applied chemistry, on the other. The foundations have been laid, and the College is making sure progress towards this end.

In addition to the instruction given in Chemistry, students receive a very complete course in the following branches: Physics, Mineralogy, Geology, Botany, Zoology. The courses in Metallurgy and Agricultural Chemistry are also open to students in this College. It is expected that a physical laboratory will be established in the near future; practice in this laboratory will then be required of students in the College of Chemistry. In short, laboratories are being established in connection with all the natural science departments, and these will be accessible to chemical students.

The chemical laboratories are very complete, and well supplied with necessary apparatus, etc.

A special course of instruction and practice in spectrum analysis will soon be inaugurated. The University possesses all the necessary apparatus, etc., for carrying on gas analyses, and these will be made ready for use as soon as a room temporarily used for another purpose can be put in readiness. Other special and practical courses may be added, from time to time, at but slight expense; for example, a course in electro-metallurgy in photography, special course in pharmaceutical preparation, etc.

A collection of chemicals has been begun, and the University is already in possession of a good and valuable nucleus of a chemical cabinet. It is my intention to increase this collection as rapidly as possible. Students can help very much in this matter. A collection to illustrate technical chemistry is much needed for class illustration, etc. A small beginning has been made, but help is needed to continue the work of getting together suitable material, etc.

A good technical library on chemistry has been brought together, and it is to be hoped that within a short time all works of value in this department will be accessible to our students. Special students are allowed to enter the chemical laboratories, and to attend lectures on chemistry, etc., if properly qualified. Such students have all the rights and privileges of regular students.

It is greatly to be desired that the students taking the special chemical course should devote a longer time to the subject than the present four years course can permit. A considerable amount of original work might then be done by the students, which would be a most valuable practice to them, and at the same time a worthy contribution to the scientific literature of this coast.

In a previous communication I have referred to the great need of this laboratory. I suggested that it could be built from the money paid into the University by students, and which was not included in the last estimate of the income of the University. I would recommend that a building be erected in the cheapest manner possible, of rough lumber, without plastering. I think that such a building

could be built for from eleven hundred to twelve hundred dollars. The demand that some provision be made to supply this want is, in my opinion, imperative. The increased receipts from students working in such laboratory, for one year, would amount to one-third the cost of its construction.

Very truly,

W. B. RISING,
Professor of Chemistry.

Berkeley, June 25th, 1877.

GENERAL MATTERS.

THE LIBRARY.

The library, which numbers fourteen thousand volumes, occupies one of the principal rooms on the main floor in the brick building, variously known as the College of Agriculture and the South Hall.

It is intended that the main library of the University shall be chiefly a reference library, so that scholars in any department may be sure of finding upon the shelves the various treatises which they wish to consult; consequently, permission to draw books from this library is given only in exceptional cases. But in building up the reference library, it is necessary to keep in mind, also, the need of supplying the students with books which they can take to their rooms with freedom; consequently, a branch circulating library has been begun in the North Hall. This circulating library is made up in part from the duplicate books belonging to the main library, and in part from the gifts of individuals, among whom the members of the Senior class of eighteen hundred and seventy-five are particularly entitled to recognition. Two other branch libraries have also been begun. The best and most important books pertaining to the science of agriculture have been transferred to the lecture room of the Professor of Agriculture, and some of those pertaining to the useful arts will be in a like manner made accessible to professors and teachers in the rooms devoted to instruction in mechanics.

In due time it is hoped that every one of the chief rooms of instruction will be furnished with the books which pertain to the studies there pursued. Thus the rooms devoted to modern languages should be supplied with the best dictionaries, grammars, and standard literary works. There should be a reference mathematical library within easy reach of the instructors of mathematics. And so in engineering, in chemistry, in historical and political subjects, the books most constantly needed by professors or students should be within easy reach. Thus the main library would be to the University a general store-house—a place of resort for the professors and students when they wished to prosecute their studies; while the instruments needed for daily service would be kept within easy reach, in the ordinary places of study and instruction.

Besides the above, there is a small library under the charge of the Professor of Mechanics and Mechanical Drawing, consisting of books relating to these subjects.

Two thousand one hundred and ninety-eight volumes, charts, etc., have been added during the past two years, of which nine hundred and twenty-five volumes have been gifts from the following parties; also, one hundred and eighty-four military maps, particularly mentioned below:

DONATIONS TO THE LIBRARY—FROM JULY, EIGHTEEN HUNDRED AND SEVENTY-FIVE TO JUNE, EIGHTEEN HUNDRED AND SEVENTY-SEVEN.

J. Preston Moore, Esq., of San Francisco, presented a rare and elegant "Atlas Geografica del Peru."

Adolph Mailliard, Esq., of San Rafael, presented a valuable set of one hundred and eighty-four military maps of France and Belgium, formerly used by Joseph Bonaparte, King of Spain.

The United States Department of State presented "The Draining of Lake Fucino," accomplished by Prince Alexander Torlonia. This book, with its volume of plates, is printed with an elegance corresponding to the importance of the engineering work and the skill displayed in its execution.

Other gifts received are as follows:

DONOR.	Vols.	DONOR.	Vols.
Agassiz, Prof. Alexander.....	10	LeConte, Prof. Joseph.....	1
Allen, Arthur H.....	1	Librarian.....	1
Amer. Institute of Mining Engineers.....	1	McGillivray, J. D.....	1
Amer. Swedenborg Publication Society, through Rev. A. C. Ayer.....	19	McHenry, Mrs. E. J., San Francisco.....	1
Anonymous.....	3	Moses, Prof. Bernard.....	11
Ashburner, Prof. William (continuation of former gift).....	3	Page, Hon. H. F.....	13
Baltimore Library Association.....	1	Payne, Rev. E. B.....	3
Bishop & Co., San Francisco.....	1	Quincy Public Library, Massachusetts.....	1
Booth, Hon. Newton.....	14	Republic of Chile.....	3
Bosqui, Edward.....	8	Richardson, A. C.....	8
Boston Public Library.....	6	Rising, Prof. W. B.....	1
California Academy of Sciences.....	4	Roberts Bros., Boston.....	1
California Department of State, through Hon. Thos. Beck.....	24	San Francisco Board of Education.....	1
California State Agricultural Society.....	4	San Francisco Board of Supervisors.....	2
Capp, Chas. S.—besides many pamphlets.....	114	San Francisco Mechanics' Institute.....	1
Carmany, John H.....	2	San Francisco Mercantile Library.....	2
Carr, Hon. E. S.....	1	Sargent, Hon. A. A.....	10
Chicago Public Library.....	1	Smithsonian Institution.....	7
Class of 1875, University of California.....	5	Sotheran, H., London.....	1
Childs, G. W., Philadelphia.....	1	Soulé, Prof. Frank.....	1
Davidson, Prof. Geo.—besides pamphlets.....	2	Stearns, R. E. C.....	9
Durant, Pres. Henry.....	3	Swett, John.....	1
Eldredge & Bro.....	1	Taylor, John, San Francisco.....	1
Fontin, Hon. P., Speaker of Assembly, Quebec.....	5	Thompson & West, San Francisco.....	1
Freud, Isaac.....	5	Thureau, G., Australia.....	1
Garretson & Co.....	1	United States Bureau of Education.....	5
Gilman, Pres. D. C.....	48	United States Department of Agriculture.....	3
Graham, Miss Mary.....	2	United States Department of the Interior.....	12
Hager, Hon. J. S.....	39	United States Department of State.....	3
Hains, Major P. C., United States Engrs.....	1	United States Department of the Treasury.....	5
Hardy, W. F.....	1	United States Department of War.....	16
Harris, Edwin.....	3	United States Library of Congress.....	6
Harris, J. Ham.....	1	United States Naval Observatory.....	3
Harvard College Library.....	7	United States Signal Service Bureau.....	12
Hawkins, L. L.....	1	United States Surgeon-General.....	1
Hilgard, Prof. E. W.....	2	White, Pres. Andrew D.....	1
Hilgard, J. E., Washington.....	2	Wiley & Sons, New York.....	1
Hittell, John S., San Francisco.....	8	Wiley, Rev. S. H., Santa Cruz.....	1
Illinois Department of Agriculture.....	9	Woodbridge, W. E., M. D., Washington.....	1
Illinois Industrial University.....	1	Woodworth, J. M., M. D., United States Army.....	2
Jackson, A. Wendell.....	2	Wythe, Prof. J. H., San Francisco.....	1
Kellogg, Prof. Martin.....	2	Yale College Library.....	1
Kerr, W. C.—Geology North Carolina.....	1	Total donations to the main library.....	527

CIRCULATING LIBRARY—DONATIONS, EIGHTEEN HUNDRED AND SEVENTY-SIX AND EIGHTEEN HUNDRED AND SEVENTY-SEVEN.

DONOR.	Vols.	DONOR.	Vols.
Bacon, H. D.	52	Pioda, Prof. Paul.	40
Bacon, Mrs. H. D.	30	Stillman, Dr. J. D. B.	1
Best, John T.	6	Williamson, Lieut.-Col. R. S.	13
Bolton, Miss Sarah.	1	Willoughby, Mrs.	1
Choynski, J. N.	12	Books bought with money donations (see below)	113
Holt, Henry & Co. (New York), about	95		
Jackson, A. Wendell	1		
Lady students of the University	10	Total	398
Page, Mrs. J. M. (Sacramento)	23		

Total of donations to both libraries 925

To the Circulating Library the following lady and gentlemen have made gifts of money :

Bachman, L.	\$10 00
Elfelt, A. B. & Co.	10 00
Glazier, I.	20 00
Grant, Adam	25 00
Hawley, Miss Mary	5 00
Nustadter Bros.	10 00
Scholle, William	20 00
Sloss, Louis & Co.	20 00
Steinhart, Ign. & Co.	10 00
Strauss, Levi & Co.	25 00
Weill, Alexander.	20 00
Total (in gold)	\$175 00

The Library has been put in good order, the large accumulation of pamphlets properly segregated according to subjects and substantially bound, including the various serials; also the unbound material of the Lieber collection.

Pamphlet cases have been provided, and additional shelving, so far as space would permit.

The Register of the Library is neatly kept, and the books have been newly arranged according to subjects, and a subject card catalogue is now completed.

MUSEUM.

One of the most attractive features to the visitor and useful to the student. For want of space but a small part of the material in this department belonging to the University can be exhibited.

In organic forms the collection is exceedingly poor. In rocks, ores, and minerals, though numerous gaps exist, this portion of the Museum is creditable to the Institution and the State, or rather, it would be, if a suitable building was provided so that the collection could be displayed.

Within the past year a large amount of work has been done in arranging and preserving the material received under the law from the Geological Survey and from other sources, and the following gifts have been received since the date of the last biennial report:

From Howard Stillman—Forty-six coins and one medal, ancient and modern, of silver, copper, and bronze.

From N. C. Carnall—Various implements used by the natives of the South Pacific Islands; also, natural history specimens from the same region, and from California.

From John Ellis—Aboriginal stone implement found at Berkeley.

From Charles Foster, West Berkeley—Stone implements from Shell Mound, at said place.

From W. Kleeman—Skull from West Berkeley Mound.

From L. B. Mizner, Benicia—A large and valuable collection of wooden carvings from Alaska, made by the natives of that Territory.

From A. Moore, West Berkeley—Aboriginal skulls and stone implement from West Berkeley Mound.

From Mr. Noble—Vertebra of whale, formerly used as a mortar by the natives.

John O'Connor, West Berkeley—Numerous articles and implements of aboriginal workmanship, made of stone and bone.

Dr. F. H. Payne, Berkeley—Portion of skeleton of Flat Head Indian, from Washington Territory.

Henry Pine, West Berkeley—Ancient stone mortar, from West Berkeley Shell Mound.

J. G. Woodbury, San Francisco—Fishing gear; also, bows, arrows, and quiver of the Wintoon Indians, of the McCloud River region, California; also, young of *salmo fontinalis*, hatched at Berkeley.

Lieutenant George R. Bacon, United States Army, Camp Harvey, Oregon—Several bird skins of native birds.

A. Chabot—Two snakes, *pituorphis*.

S. B. Christy—Minerals from Nevada, etc.; also, specimen of bat, local species.

X. Y. Clark—Specimen of nitre from Nevada, and a tarantula from Mount Hamilton, Santa Clara County.

A. W. Crawford, Oakland—Snake, *tropidonotus infernalis*.

W. F. Finney—Great horned owl and kingfisher.

A. W. Jackson, Jr.—Specimen of *arachnida*, from Berkeley.

From Julian LeConte, Oakland—Portions of skeleton of whale, dredged in San Francisco Bay; also, specimens of mollusca, from mouth of San Antonio Creek.

A. J. Lowe, San Francisco—Tusks of boar from Grizzly Island, Solano County.

J. Mailliard, San Rafael—Nests of ground robin, thrush, and titmouse; skull of wild cat, from Marin County.

S. R. Rhodes, Oakland—Rattles and skull of rattlesnake.

J. C. Rowell—Snake lizard, from Mendocino County.

R. E. C. Stearns—Specimens of mollusca, from Cannes, south of France, also from Great Britain.

C. D. Voy—Skull of wild cat; also, specimens of eyeless fish, from Mammoth Cave, Kentucky; specimens of bread fruit, from Society Islands; minerals, woods, seeds, plants, etc., from South Sea Islands, California, Nevada, and elsewhere; fine crystals of Siberian topaz.

From J. J. Rivers, Berkeley—Numerous specimens of several species of reptiles, birds, mammals, insects; also, ethnological and osteological material, etc., from the neighborhood of the University.

A series of specimens of corals, gorgonia, etc., dry and in alcohol, from W. J. Fisher, of the Tuscarora Expedition; also, a series of Sandwich Island ferns, from W. R. Frink.

From Melville Atwood—*Olivite*, from Sandwich Islands.

From Professor George Davidson—*Magnesite*, from Fort Point, San Francisco.

From F. H. Denman—Moss agate, from North Bloomfield, California.

From Redick Eddy—Infusorial earth, from Nevada.

From Dr. A. Mead Edwards, Berkeley—Lignite, from Ione City, California.

From E. A. T. Gallagher—Ores and rocks, from the Almaden Consolidated Quicksilver Mines, California.

From L. L. Hawkins, Berkeley—Minerals from Nevada and California.

From J. D. Hoffmann—Epidote from Mount Tallac, El Dorado County, California.

From J. Hutchinson—Obsidian, Mount Shasta.

M. E. Jaffa—Cassiterite and rotissite, from Australia.

From Professor Joseph LeConte—Amethyst, from South Carolina.

J. W. Loomis, Reno, Nevada—Ores and rocks, from vicinity of Reno.

H. Pearce, San Francisco—Cinnabarite, from Lake County, California.

C. B. Plummer, San Francisco—Quartz crystals and amazon stone, from Pike's Peak; also, quartz crystal, from Montana.

From C. A. Ritter, San Francisco—Turquoise, Esmeralda County, Nevada; native silver in crystal of quartz.

H. Rivers, Berkeley—Amazon stone, Pike's Peak, and various minerals, also from Colorado.

Dr. A. Thibodeaux, Arizona—Biolite and tourmaline, from near Prescott.

Dr. C. L. Anderson—*Algæ Exsiccatae Americæ Borealis Fasciculus I.*

From Angus Mackey, Esq., Commissioner from Queensland to the Centennial Exposition—A large series of the tin ores from, and a map of, Queensland.

From Mrs. E. Mack—A massive and valuable specimen of silver ore from Mono County, California.

Gifts to the Museum have also been made by B. N. Bugbey, of Folsom; Colonel A. Lewis, of Siskiyou County; P. A. Giannini, Inyo County; Charles Purdy, of Placer County; George J. Love; J. M. Taylor, Santa Clara County; H. G. Hanks, of San Francisco, and F. G. Easterby, of Berkeley.

For the Agricultural Department, presents of rare seeds from Dr. C. C. Parry and Dr. Edward Palmer, of Washington City; seeds from Japan, from S. Takati, Japanese Consul in San Francisco; cactus plants, from L. L. Hawkins, and five hundred gray ash trees, from S. C. McCullough, of Lima, Ohio, and seeds, plants, and cuttings from Dr. A. Kellogg, W. G. W. Harford, Professor George Davidson, C. D. Voy, W. J. Fisher, and others.

OTHER DONATIONS.

The University has been the recipient of a handsome gift from Charles Mayne, Esq., of San Francisco, of a series of bronze busts, made by Barbedienne, of Paris, consisting of five pieces, copies from originals in the European Museums, representing Solon, Socrates,

Hippocrates, Homer, and Franklin, which have been placed in the University Library.

From the Oakland Ladies' Relief Society—A bust of ex-President Durant, executed by P. Mezzara.

From Henry Janin, Esq.—A valuable and instructive model of the New Almaden Quicksilver mine has been received; and for the College of Mechanics, a valuable working model of a locomotive, the gift of Henry Tripp, Esq., M. E., Mazatlan, Mexico; and through Judge S. C. Hastings, Surveying and Assaying Apparatus, the bequest of his son, the late Marshall Hastings.

From Charles Rueger, Esq., of Benicia—A large and excellent, framed, water color drawing of a hydraulic engine.

A Presidential gown and chair for commencement and similar public occasions, from certain ladies of Oakland.

Several valuable models have been purchased for the College of Engineering from certain money given for this special purpose by H. D. Bacon, Esq., of Oakland.

LICK ASTRONOMICAL ENDOWMENT.

The most conspicuous gift to the University, during the period embraced in this report, has been the magnificent bequest of the late James Lick, for the endowment of the Lick Astronomical Department of the University of California.

The importance of this gift, to the University, the State, and, it may be said, to science and the world, warrants the publication in full of the correspondence in connection therewith.

[CORRESPONDENCE.]

OFFICE OF THE BOARD OF TRUSTEES OF "THE JAMES LICK TRUST,"
SAN FRANCISCO, November 1st, 1875.

To the Regents of the University of California:

GENTLEMEN: I am instructed by the Board of Trustees of the "Lick Trust," to inform you that you are one of the Beneficiaries of the Trust.

The terms of the Trust in your favor are to be found in the following extract from the Trust Deed, viz:

"*Third*—To expend the sum of seven hundred thousand dollars (\$700,000 00), for the purpose of purchasing land and constructing and putting up on such land as shall be designated by the party of the first part, a powerful telescope, superior to and more powerful than any telescope ever yet made, with all the machinery appertaining thereto and appropriately therewith, or that is necessary and convenient to the most powerful telescope now in use or suited to one more powerful than any yet constructed; and also a suitable Observatory connected therewith. The parties of the second part hereto and their successors shall, as soon as said telescope and observatory are constructed convey the land whereupon the same may be situated, and the telescope, observatory, and all the machinery and apparatus connected therewith, to the corporation known as the 'Regents of the University of California:' and if, after the construction of said telescope and observatory, there should remain of said seven hundred thousand dollars in gold coin, any surplus, then said parties of the second part shall turn over such surplus to said corporation, to be invested by it in bonds of the United States, or of the City and County of San Francisco, or other good and safe interest-bearing bonds, and the income thereof shall be devoted to the maintenance of said telescope and the observatory connected therewith, and shall be made useful in promoting science; and the said telescope and observatory are to be known as 'The Lick Astronomical Department of the University of California.'"

I am further instructed to say, that Mr. Lick has selected as the site of the observatory a section of land belonging to the United States, situated on Mount Hamilton, in Santa Clara County, California. We desire to have your cooperation in attaining the title through the State grant to you.

We shall be pleased to hear that you accept the donation; and also, in what manner and to

what extent you are authorized or feel disposed to assist in carrying out the views of the beneficent donor.

I have the honor to be, very respectfully, your obedient servant,

RICHARD S. FLOYD,
President of the Board of Trustees of the Lick Trust.

OFFICE OF THE REGENTS OF THE UNIVERSITY OF CALIFORNIA.

Captain Richard S. Floyd:

DEAR SIR: Your communication as President, and on behalf of the Board of Trustees of the Lick Trust, addressed to the Regents of the University of California, in which you informed them that they were Beneficiaries of the Trust whereby James Lick appropriated a fund of seven hundred thousand dollars, to the construction of a telescope superior to any yet produced, and an observatory, both of which when completed, with their machinery and apparatus, and the land whereon they shall be located, he directed said Board of Trustees to convey unto said Regents, was officially considered by them, and on behalf of the University of California this munificent donation of Mr. Lick was unanimously accepted.

We are instructed by the Regents to offer you, and (through you) the Board of Trustees of the James Lick Trust, their thanks for the courteous manner in which you have notified them of this trust and solicited their acceptance of the gift of Mr. Lick. In contemplation of the magnitude and splendor of this large endowment, it was deemed advisable, besides their recognition (through yourselves) of his noble benefaction, to make a further and personal acknowledgment to Mr. Lick, expressive of their thankfulness for his donation and appreciation of its value.

We are also instructed to inform you, that the Regents will coöperate with your Board in attaining the title to the lands designated in your communication, through the grant to them, and are cordially disposed to assist in carrying out the views of the beneficent donor, within the limits of their authority and influence, the manner and extent of which coöperation we are empowered to arrange by personal communication with you and your colleagues.

We are, sir, your obedient servant,

WILLIAM T. WALLACE,
J. WEST MARTIN,
JOSEPH W. WINANS,
Special Committee.

San Francisco, December 7th, 1875.

OFFICE OF THE BOARD OF REGENTS OF THE UNIVERSITY OF CALIFORNIA.

JAMES LICK, Esq.,

HONORED SIR: The Board of Trustees of the Lick Trust, through their President, Captain Richard S. Floyd, have officially notified the Regents of the University of California, that so soon as the telescope, which you have designated as "one superior to and more powerful than any telescope ever yet made," and its observatory—for the construction and equipment whereof you have created a Trust Fund of seven hundred thousand dollars—shall have been completed, the said Trustees are directed by the terms of such Trust to convey the said "telescope, observatory, and all the machinery and apparatus connected therewith," together with the land wherever the same may be situated, to the corporation known as the Regents of the University of California, to be by them made perpetually useful in promoting science, and to be known as "The Lick Astronomical Department of the University of California."

In response to this act of spontaneous, and almost unparalleled munificence, whereby the interests of science, through one of its most exalted departments, may be enabled to attain, upon the shores of the Pacific, and in one of the youngest States of the Republic, a higher advancement than has ever yet been reached by the oldest and most enlightened nations of the globe, the Regents of the University have delegated to us the duty of announcing their acceptance of this splendid gift, and their appreciation of the noble purpose of its author.

From an endowment so exceptionally grand and massive, the advantages which must result to the cause of science in the future are incalculable. Not only will it impart its lustre to our State and to our country, but we may reasonably anticipate that its beneficent effects, and improved facilities for research into the mysteries of nature, will confer their influence and benefits on all mankind.

To you, sir, whose desire for the promotion of learning has prompted, whose intelligence has planned, and whose bounty has provided resources for the construction and maintenance of this stupendous work, belongs, and has been freely manifested, the gratitude of a whole community.

Among those public benefactors, of whose bright examples our country yields so many instances, your name will ever hold a prominent and honored place.

While the Regents tender you their thanks for having made the University of California the

recipient of your magnificent donation, they assure you that they will faithfully endeavor to realize its highest aims, and consummate the scientific objects of its founder.

JOS. W. WINANS,
WM. T. WALLACE,
J. WEST MARTIN,
Special Committee.

San Francisco, December 7th, 1875.

IMPROVEMENT OF THE GROUNDS, WATER SUPPLY, ETC.

As the income of the University has not permitted the grading of the grounds immediately around the buildings, or the making of roads, only a small amount has been expended during the two years covered by this report.

A substantial drain of ample size has been put in the gulch in the intervalle just north of the North building. This is a very important work as the ground was previously badly gullied, becoming worse each winter, the water carrying a large quantity of alluvium into the northerly branch of the creek. The intervalle has now an unbroken surface, and has yielded good crops of hay.

On the southwesterly portion of the grounds, immediately south of Strawberry Creek, and in the rear of the Students' Cottages, a large amount of grading has been done, the main road, drive-ways, and foot paths graded, and board edgings set, and the plats or beds planted with a variety of ornamental plants, shrubs, and trees.

Three substantial and comely drive-way bridges and one foot bridge have been built over the main creek and its branches, and the road-ways properly levelled to connect therewith. Also a foot bridge across the creek with plank walks, necessary to reach the University buildings.

The lack of means has prevented the proper completion of the roads over the lower part of the University grounds which require suitable drains, paved side gutters, and a top coat of macadam.

The location of the depot of the new steam railroad to Berkeley increases the necessity for this latter work, as the roads with the present clay surface are nearly impassable in winter.

A substantial corral has been built in the rear of and around the barn, also a large shed for the reception of carts, wagons, and agricultural tools in general; made a large piece of road in connection with a bridge crossing a creek separating the college buildings from the agricultural grounds, also laid a double plank walk from the buildings to the railroad depot, with foot bridge crossing Strawberry Creek.

There has been leveled, graded, and laid out a large piece of ground designated the "Tropical Gardens," and planted with palms, orange, and lemon trees, ficus, magnolias, and some hundreds of other botanical species.

We have built a strong picket fence on street in front of Students' Cottages, inclosing University property on the line proper for something over one thousand five hundred lineal feet; graded the street in connection with said fence, and removed several thousand yards of gravel, which was afterwards used in completing walks connected with grounds laid out in front and about the cottages; also graded the walks and roads in front of the cottages in question, and defined the same properly with board edgings. Connected drains with the club-houses for carrying off surplus water from roofs and

slop-sinks, so that the drainage is complete. Planted the grounds in front of the club-houses and other portions of the land attached not previously planted. This planting has taken many hundreds of plants, and during the proper season several hundred pines have been planted on bare knolls in the University grounds.

There has also been laid down some twenty-six hundred feet of three-inch water-pipe (replacing an old worn-out board flume) through the Strawberry Creek Cañon, connecting with reservoir. Grades were properly established, and the pipe sunk in the ditches to such depths as the levels and grades demanded for the necessary flow of the water; and so far as this part of the water works is concerned, it is made complete and effective.

In the propagating houses, several thousand plants have been propagated and grown, and many hundred young trees and shrubs in the nursery department which require to be permanently planted out, but the want of funds to properly lay out the grounds is the cause of retention of many plants in the nursery department.

In connection with the above-named improvements the necessary work pertaining to the agricultural department has been attended to, also the keeping of the portion of grounds already improved in order, and irrigated when necessary.

New and serviceable plants are constantly being added to present collections, and seeds, etc., are being obtained and grown.

LAND DEPARTMENT.

On the twenty-first of November, eighteen hundred and seventy-six, Mr. J. W. Shanklin, who was appointed Land Agent January first, eighteen hundred and seventy-five, resigned and was succeeded by Mr. J. Ham. Harris on the following fifth of December. Mr. W. P. Saxe was also appointed Assistant Land Agent at the latter date.

For the operations and business of this department, attention is called to the appended tables.

The Committee on Education and Labor, of the House of Representatives in Washington, through the Chairman, Mr. Monroe, submitted to Congress, on the thirteenth day of January, eighteen hundred and seventy-five, a report on the condition and management of colleges in the various States which had received a grant from the United States under the Act of July second, eighteen hundred and sixty-two. This report exhibits the amount of money received in every State from the aforesaid grant, and it shows how successfully the affairs of the University of California have been managed, in comparison with those of other kindred institutions.

It appears that the institutions formed in the various States have received the following prices per acre for the lands which they have sold:

STATES.	Amount.	STATES.	Amount.
Alabama.....	\$0.90	Missouri.....	\$1.84
Arkansas.....	.90	Nebraska.....	
California.....	5.00	Nevada.....	
Connecticut.....	.75	New Hampshire.....	.535
Delaware.....	.92	New Jersey.....	.55
Florida.....		New York.....	.61
Georgia.....	.90	North Carolina.....	.50
Illinois.....	.70	Ohio.....	.5436
Indiana.....	.544	Oregon.....	
Iowa.....	2.27	Pennsylvania.....	.563
Kansas.....		Rhode Island.....	.415
Kentucky.....	.50	South Carolina.....	.725
Louisiana.....	.87	Tennessee.....	.908
Maine.....	.555	Texas.....	.87
Maryland.....	.5357	Vermont.....	.818
Massachusetts.....	.656	Virginia.....	.95
Michigan.....	3.25	West Virginia.....	.60
Minnesota.....	5.62	Wisconsin.....	1.25
Mississippi.....	.90		

INVESTMENT IN BONDS OF THE LAND PRINCIPAL.

Since the date of the last, and during the period covered by this, report, further investments of the principal arising from the sale of agricultural lands, received under the Congressional grant of eighteen hundred and sixty-two, have been made, as said principal has accrued, to the amount of one hundred and fifteen thousand four hundred and twenty-seven dollars and fifty cents. The statement appended hereto is respectfully referred to, for a description of the bonds purchased in this connection.

GEOLOGICAL SURVEY.

By an Act of the Legislature, approved March twenty-seventh, eighteen hundred and seventy-four, the material, equipments, etc., of the geological survey were turned over to the University, as custodian or trustee. We received the material without an inventory. It has been stored at the University, so as to insure its preservation.

The specimens of all kinds are, by the Act creating the survey, the property of the University, and will soon be opened and properly arranged.

The legislative Act referred to appropriated five thousand dollars for the expenses incident to the performance of its requirements. Of said amount, demands to the amount of three thousand nine hundred and eighty-one dollars and twenty-two cents have thus far been paid, leaving a balance of one thousand and eighteen dollars and seventy-eight cents to meet certain outstanding bills and demands likely to accrue.

From the sales of books, maps, etc., being publications of the survey, the following amounts have been paid into the State treasury, for the benefit of the School Fund of the State, as required by law: November tenth, eighteen hundred and seventy-five, two hundred and forty-five dollars and seventy cents.

FINANCIAL STATEMENTS.

*By the Regents of the University of California, from July 1st, 1875, to
July 1st, 1877.*

RECEIPTS.

Land Fund—From sales of Agricultural College Grant.....	\$89,627 22
Fee Fund—From fees on Applications, Certificates of Purchase, Patents.....	2,815 00
Excess Payments—From collections of \$1 25 per acre, due the United States for double minimum lands.....	15,521 71
Land Interest—From interest received on sales of Agricultural College Lands..	82,807 53
Water rates—From sales of water at Berkeley.....	1,897 85
State Appropriation—From State treasury for support of the University, final payment made January, 1876.....	42,400 00
State Endowment Interest—From State treasury—Interest from Tide Land Bonds.....	100,305 88
Interest Account—From interest from Bank of California on daily balances....	1,612 83
From interest on Brayton Property Notes.....	15,890 48
From interest on Bank Certificates of Deposit.....	5,211 50
United States Endowment Interest—From interest on Bonds—Investment of Land Fund.....	21,613 00
Interest on Bonds—Special investment.....	420 00
Geological Survey—From warrants issued by State Controller.....	4,351 95
Berkeley Property Rents—From rents of Students' Cottages.....	4,224 10
Laboratory—From students for use of chemicals.....	892 59
Equipment and Repairs—From sale of settees, lumber, etc.....	363 83
Brayton Property—From return of mortgage tax.....	1,015 87
University Site Improvement—From pasturage and sales of hay.....	1,040 93
Apparatus—From return of balance of deposit in Paris by Prof. Fisher.....	\$202 43
Commission on Papyrograph.....	10 00
	212 43
Bills Receivable—From payment of Brayton Property Notes.....	41,283 75
Forfeited Seminary Land Fund.....	450 00
Forfeited Seminary Land Interest.....	354 82
Forfeited Seminary Land Fees.....	16 00
Telegraphing and Expressing—From commissions from Telegraph Office at University.....	56 33
Library—From sale of pamphlet cases.....	4 50
United States Endowment—Sale of bonds, by order of Board of Regents.....	21,950 55
College Celebrations.....	182 25
Tuition Fees.....	125 00
Insurance—Commissions returned.....	143 75
Total receipts from July 1st, 1875, to July 1st, 1877.....	\$456,821 65

DISBURSEMENTS.

United States Endowment (of 150,000 acres)—Investment of Land Fund in bonds		\$136,712 55
Excess Payments—Paid United States on double minimum lands		2,604 50
Geological Survey—Paid Julius Bien for lithographic stones of maps, etc.		3,333 17
Salaries of Professors and Instructors		140,464 58
Salaries of Secretaries, Land Agent, Janitors, etc.		30,179 30
Rent of San Francisco rooms for Regents and Land Agent		1,360 00
Interest—On loans from Bank of California and transfer premiums	\$416 56	
Paid accrued interest on bonds purchased	792 00	
Land interest repaid John Mullen	29 70	
		<hr/> 1,238 26
University Site Improvements—See Appendix A		7,823 64
Equipment and Repairs—See Appendix B		11,027 03
Advertising and Printing—See Appendix C		1,985 66
Stationery—See Appendix D		229 00
Library—See Appendix E		6,582 70
Apparatus—See Appendix F		2,286 19
Agricultural Department—See Appendix G		4,310 81
Students' Cottages—See Appendix H		<hr/> 1,783 72
Amount carried forward		<hr/> \$351,921 11

RECEIPTS AND DISBURSEMENTS—Continued.

Amount brought forward.....	\$351,921 11
Museum—See Appendix I.....	1,024 24
Land Administration—See Appendix J.....	787 50
Land Administration—Commissions and premiums paid on bonds.....	712 50
Office Expenses—See Appendix K.....	207 17
College Celebrations—See Appendix L.....	738 00
Incidental Expenses—See Appendix M.....	106 00
Insurance—See Appendix N.....	3,772 88
Contingent Fund—Of Secretary and Professor of Agriculture, for payment of small bills.....	1,875 00
University Water Company—See Appendix O.....	1,218 19
Berkeley Property Rents—Repairs on Students' Cottages—See Appendix P.....	1,227 73
Water Rates—Salary of Custodian and Repairing of Flume.....	408 00
Telegraphing and Expressing.....	340 80
Fuel, Lights, and Water—For coal and wood.....	2,223 23
Bills Payable—Paid Bank of California.....	20,539 94
Laboratory—Paid for chemicals.....	4,101 62
University Printing Office—Paid for type.....	268 45
Toland Medical College—Diplomas and gas bills.....	55 26
United States Endowment Interest—Paid accrued interest on bonds purchased.....	524 33
Land Fund—Certificates of Purchase canceled for want of title.....	127 46
Land Interest returned.....	8 45
Land Fees returned.....	8 00
Official and Lecturing Expenses.....	38 25
Postage.....	120 77
College of California—Fees paid Attorneys J. W. Dwinelle and Glascock.....	200 00
Special investment in bonds.....	32,262 50
Seminary Land Fund—Investment in bonds.....	19,380 00
Deposits in San Francisco Savings Union Bank of San Francisco.....	\$6,000 00
Deposits in Union Savings Bank, Oakland.....	6,000 00
	<hr/>
	12,000 00
Total Disbursements from July 1st, 1875, to July 1st, 1877.....	<hr/> \$456,197 38

APPENDIX A.—University Site Improvements.

Labor on grounds, from June 1st, 1875, to May 31st, 1876.....	\$2,641 49
Lumber for bridges.....	482 62
Lumber for drains and sewerage.....	516 33
Lumber for walks.....	82 71
Pressing hay.....	86 10
Blacksmithing.....	25 50
Hauling hay to Oakland.....	45 00
Hardware.....	26 00
Water-pipe and laying of same.....	302 25
Trees and plants.....	29 00
Seed for hay.....	37 13
Labor on grounds.....	2,685 87
Baling hay.....	129 20
Lumber for walks to depot.....	127 69
Lumber for fence in front of cottages.....	181 80
Lumber for fencing walks and drains.....	364 51
Water-pipes for grounds.....	45 44
Students labor (removing rocks).....	15 00
	<hr/>
	\$7,823 64

APPENDIX B.—Equipments and Repairs.

Labor from June 1st, 1875, to May 31st, 1876.....	\$1,733 00
Lumber.....	805 67
Hardware.....	152 11
Furniture (equipment of Professors, Instructors, and class-rooms).....	1,086 34
Carpeting.....	194 03
Alterations in North Hall.....	705 00
Mason work.....	274 00
Repairing elevator.....	33 50
Bricks, lime, and cement.....	84 25
	<hr/>
Amount carried forward.....	\$5,067 90

RECEIPTS AND DISBURSEMENTS—Continued.

Amount brought forward.....	\$5,067 90
Repairing steam-pipe.....	4 00
Step ladders, floor brushes, brooms, etc.	48 72
Paints, oils, and glass.....	175 25
Painting North Hall.....	950 00
Repairing lock.....	1 00
Doors, sash, and settée rounds.....	101 50
Repairing drums.....	29 00
Doors, windows, and frames for shades.....	59 00
Stencils.....	16 25
Wire window guards for North and South Halls.....	555 84
Repairing sewer.....	59 00
Gas machine.....	700 00
Dictionaries.....	26 80
Platform scales.....	50 00
Sheet iron and pipe for Agricultural Department.....	34 42
Fixtures for Metallurgical Laboratory.....	44 00
Rulers, triangles, etc., for Mathematical Department.....	49 75
Repairing telegraph instruments.....	18 86
Equipment of Chemical and Metallurgical Laboratories.....	65 95
Repairing steam-boiler and heater.....	146 59
Repairing heater and laboratories.....	498 21
Keys and rings.....	4 05
Grate bars for steam-boiler.....	2 10
Cleaning guns.....	25 00
Wire window guards for outbuildings.....	68 54
Labor.....	442 12
Asphaltum floor in North Hall.....	590 00
Carpets for Regents' rooms in San Francisco.....	274 87
Painting roof of South Hall.....	71 04
Settees for Professor John LeConte's lecture-room.....	308 00
Dusters, floor brushes, keys, etc.	41 37
Glazing.....	49 60
Sash partition and shelves for room of Professor of Astronomy and Civil Engineering.....	84 68
Furniture.....	51 00
Glass, paints, and oils.....	33 43
Lumber.....	60 96
Hardware.....	218 32
	<hr/>
	\$11,027 03

APPENDIX C.—ADVERTISING AND PRINTING—*Printing.*

University Press for printing bulletins, programmes, lists for library and museum, class schedules, and studies, labels, placards, etc.	\$578 47
Annual Report of Regents.....	175 97
President Gilman's statement of the progress and condition of the University of California.....	136 55
President LeConte's memorial, etc.	29 50
Regents' memorial.....	62 15
Register for 1876, and papers for Faculty.....	138 03
University Press for printing bulletins, programmes, list for library, and museum, class schedules, and studies, labels, placards, etc.	342 25
Annual Report of Regents.....	181 24

Advertising.

California Teacher, six months.....	50 00
Sundry newspapers, commencement, lectures, proposals, etc.	272 00
Sundry newspapers, commencement, lectures, proposals, etc.	19 50
	<hr/>
	\$1,985 66

APPENDIX D.—*Stationery.*

For general use of the University.....	72 75
For Secretary's office.....	33 00
For general use of the University.....	76 50
For Secretary's office.....	46 75
	<hr/>
	\$229 00

RECEIPTS AND EXPENDITURES—Continued.

APPENDIX E.—*Library.*

Purchase of books	\$4,403 85	
Binding of books	1,301 20	
Student labor	25 00	
Pamphlet cases	45 30	
Express charges and freight	14 35	
Charges of Custom-house broker	22 75	
Purchase of books and periodicals	675 10	
Purchase of maps	20 00	
Purchase of cards	26 00	
Purchase of cases	41 25	
Freights	7 90	
		\$6,582 70

APPENDIX F.—*Apparatus.*

Solar compass, Tripod, and Micrometer Telescope	212 60	
Beindorff's Apparatus for Agricultural Department	173 36	
Turbine wheel	35 25	
Schroeder models	866 81	
Sciopticons	103 34	
Plane table and rod	218 30	
Express charges and freight	68 50	
Steam bath, infusion jars, etc., for Agricultural Department	82 88	
Microscopic slides	16 00	
One set tuning forks for vocal sounds, one set of five Helmholtz resonanters, and one apparatus for multiplying images	95 00	
For surveying instruments	301 65	
For papyrograph with letter press	112 50	
		\$2,286 19

APPENDIX G.—*Agricultural Department.*

Labor from June 1st, 1875, to May 31st, 1876	\$1,823 63	
Brass fittings for soil elutriator	18 00	
Grain for feed	104 02	
Poison for squirrels	36 80	
Express charges	23 90	
Harness gear	11 35	
Manure	44 25	
Paper for herbarium, and seed potatoes	16 30	
Seed wheat	118 04	
Seeds and phosphates	21 92	
Map of agricultural grounds	25 00	
Blacksmithing	50 50	
Hay rake	40 50	
Lumber	15 45	
Labor	1,479 88	
Plants and seeds	99 71	
Hose	139 00	
Blacksmithing	107 40	
Paints and glass	6 40	
Harness	11 25	
Repairing mowing machine	19 80	
Horse feed	97 71	
		\$4,310 81

APPENDIX H.—*Students' Cottages.*

Labor	\$36 00	
Lumber	41 86	
Gutters	59 36	
Labor of Carpenter—building board fence, etc.	52 50	
Four tanks, for hot and cold water, with water-pipe	104 00	
Making alterations and additions to four cottages, as per contract	1,442 00	
Wash tubs	48 00	
		\$1,783 72

RECEIPTS AND EXPENDITURES—Continued.

APPENDIX I.—*Museum.*

Labor.....	\$32 00
Lumber.....	5 54
Express charges and freight.....	15 35
Paper.....	13 20
Cases.....	900 00
For hammers, anvils, etc.....	15 80
For glass.....	6 00
For expenses obtaining specimens from Shell Mound.....	7 60
For printing cards.....	12 50
For walnut bases.....	16 25

\$1,024 24

APPENDIX J.—*Land Administration.*

Removing safe and furniture.....	\$65 00
Signs for Land Office.....	5 00
Coal and wood.....	11 50
Janitor's salary from July 1st, 1875, to February 29th, 1876.....	48 00
Printing for Land Office.....	19 60
Commissions and premiums on bonds.....	712 50
Transcript of Seminary lands.....	30 00
Cleaning and adjusting locks of safe.....	4 50
One safe.....	175 00
Fees and costs of suits.....	133 45
Stationery.....	46 75
Hotel bill and traveling expenses (Sacramento) of Land Agent.....	40 15
Traveling expenses of Land Agent.....	54 00
Moving safe.....	10 00
Postage and post-office box rent.....	51 20
Express charges.....	10 50
Telegrams.....	5 35
Locks and keys.....	3 50
Rubber stamp.....	2 50
Coal and wood.....	11 50
Salary of Janitor.....	60 00

\$1,500 00

APPENDIX K.—*Office Expense.*

Signs for Regents' rooms.....	\$10 00
Carpets for Regents' rooms.....	95 95
Check book.....	40 00
Pens, rubber bands, and blank book.....	12 47
Directory of San Francisco.....	3 00
Check book.....	40 00
Stationery.....	5 75

\$207 17

APPENDIX L.—*College Celebrations.*

Collation for commencement.....	\$25 00
Labor for commencement exercises.....	34 55
Dies for medal.....	125 00
Filling diplomas.....	63 00
Cash contingent.....	300 00
Labor, preparing platforms, etc.....	77 25
Filling diplomas.....	22 00
Examination paper.....	61 50
Lumber for platforms.....	30 00

\$738 00

APPENDIX M.—*Incidental Expenses.*

Labor in library and Secretary's office.....	\$26 00
Lithographing map of water supply.....	30 00
Police service.....	50 00

\$106 00

APPENDIX N.—*Insurance.*

Premiums paid on insurance of North and South Halls.....	\$2,050 08
Premiums paid on insurance on Students' Cottages.....	189 00
Premiums paid on insurance on barn, stock, and implements.....	48 15
Premiums paid on insurance of North and South Halls.....	1,437 50
Premiums paid on insurance of barn.....	48 15

\$3,772 88

RECEIPTS AND EXPENDITURES—Continued.

APPENDIX O.—*University Water Works.*

Labor, putting in pipe, etc.-----	\$140 12	
Pipe-----	778 07	
		\$1,218 19

APPENDIX P.—*Berkeley Property Rents, Repairs of Students' Cottages.*

Labor of carpenter on repairs-----	\$172 00	
Sheet tin, repair of roofs-----	96 10	
Whitening cottage rented by Professor LeConte-----	40 00	
Painting roofs-----	280 00	
Painting cottages outside-----	440 00	
Repairing locks and duplicate keys-----	15 35	
Plumber's work-----	19 17	
Cleaning paint and floors-----	14 20	
Broom, soap, soda, etc.-----	3 25	
Glazing, painting, and whitening inside of cottages-----	147 66	
		\$1,227 73

STATEMENT OF CASH ASSETS AND LIABILITIES, JUNE 30TH, 1877.

ASSETS.

Cash balance with Treasurer, D. O. Mills-----	\$32,000 36	
Cash in Secretary's office-----	1,250 00	
		\$33,250 36
Bills receivable from sales of Oakland property-----	\$82,511 25	
Bills receivable to credit of Land Fund-----	10,975 10	
		93,486 35
Cash deposits in savings banks-----	12,725 00	
State Endowment interest, due June 30th; payable July 2d, 1877---	25,020 00	
Special Investment Fund—Par value of bonds-----	31,000 00	
United States Endowment interest, from investment of Land Fund in State and County bonds-----	7,731 67	
Seminary Land Fund interest-----	541 50	
Special Investment Fund interest-----	622 00	
Interest due by savings banks-----	826 19	
		\$205,203 07

LIABILITIES.

Land Fund—Cash on hand awaiting investment-----	\$5,412 58	
Bills receivable, bearing 10 per cent. per annum interest--	10,975 10	
		\$16,387 68
Excess payments:		
Due United States for excess of \$1 25 per acre on double minimum land—currency, \$48,851 80; gold-----	46,897 73	
Unpaid bills, due sundry parties for supplies, etc.-----	5,663 23	
Total liabilities-----		68,948 64
		\$136,254 43

INVESTMENT OF LAND FUND

For account of United States endowment of one hundred and fifty thousand acres of agricultural lands.

Date of Purchase -----	DESCRIPTION OF BONDS.	Number of Bonds -----	Denomination of Bonds -----	Par Value of Bonds -----	Rate of Purchase -----	Amount Paid for Bonds ---	Rate of Interest—percent..	Amount of Annual Interest..
1875 March 15----	State of California Bonds—Numbered from 2,341 to 2,364, both inclusive, made payable to bearer; interest payable semi-annually, on second of January and July. Bought of Charles Sutro, and on deposit with D. O. Mills, Treasurer of the University of California.	24	\$1,000 00	\$24,000 00	98½	\$23,640 00	6	\$1,440 00
March 31----	California State Bond—Numbered from 2,976 to 3,991, inclusive; dated April 1st, 1875, made payable to the Regents of the University of California, redeemable at the pleasure of the State, after the second of January, 1878, and payable on the second of January, 1893. Interest payable semi-annually on the second of January and July. Purchased of the State Loan Commissioners, and deposited with D. O. Mills, Treasurer.	1	116,000 00	116,000 00	Par.	116,000 00	6	6,960 00
December 8.	City and County of San Francisco Bonds—Funded debt of 1858. Numbers 521, 522, 523, 527, and 692. Made payable to bearer. Interest payable semi-annually on the second of January and July. Bought of Hickox & Spear. Deposited with Treasurer.	5	1,000 00	5,000 00	Par.	5,000 00	6	300 00
December 8.	City Hall Construction Bonds of the City and County of San Francisco—Numbered 14, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 263, 264, 265, 266, 271, 273, 274, 275, 276, 277, 278, 279, 281, 282, 283, and 262. Interest payable semi-annually on the second of January and July. Bought of Hickox & Spear, and deposited with D. O. Mills, Treasurer.	27	500 00	13,500 00	92	12,420 00	6	810 00
1876 March 15----	City of Oakland Sewer Bonds—Principal due in 1885. Numbered 101 to 113, both inclusive. Interest payable semi-annually, on the second of January and July. Bought of Charles Sutro. Deposited with D. O. Mills, Treasurer.	13	1,000 00	13,000 00	98½	12,805 00	8	1,040 00
March 15----	City Hall Construction Bonds of the City and County of San							

March 15	Francisco—Principal due in 1899. Numbered 33, 44, 45, 46, 47, 48, 51, 52, 53, 91, 92, 93, 94, 108, 109, 110, 112, 113, 115, 116, 117, 118, 120, 122, 123, 124, 125, 129, 131, 132, 216, 217, 218, 219, 226, 227. Interest payable semi-annually, on the second of January and July. Bought of Charles Sutro. Deposited with D. O. Mills, Treasurer.	36	500 00	18,000 00	94½	17,010 00	6	1,080 00
March 15	Montgomery Avenue Bonds of the City and County of San Francisco—Dated January 1st, 1873. Payable in thirty years. Numbered 16, 41, 42, 43, 384, 385, 719, 720, 721, 722, 723, 724, 725, 726, 727, 858, 871, 872, 937, 938, 1,421, and 1,422. Payable to bearer. Interest payable semi-annually, on second of January and July. Bought of Charles Sutro, and deposited with D. O. Mills, Treasurer.	22	1,000 00	22,000 00	86½	19,030 00	6	1,320 00
June 17	State of California Bond—Funded debt of 1873. Principal redeemable from January 2d, 1878, to January 2d, 1893. Numbered 2,453. Payable to bearer. Interest payable semi-annually, on the second of January and July. Bought of Charles Sutro, and deposited with D. O. Mills, Treasurer.	1	1,000 00	1,000 00	Par.	1,000 00	6	60 00
	San Francisco School Bonds—Ten bonds of \$1,000 each of School Bonds of City and County of San Francisco.	10	1,000 00	10,000 00	97½	9,750 00	6	600 00
	Total investment to July 1st, 1876.	139		\$222,500 00		\$216,555 00		\$13,610 00
Sept. 13.	San Francisco School Bonds of the City and County of San Francisco—Numbered 59, 60, 61, 62, 63, 64, 65, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, and 89.	20	\$1,000 00	20,000 00	99½	19,900 00	6	1,200 00
Sept. 13.	City Hall Construction Bonds of the City and County of San Francisco—Numbered 191, 192, 193, 292, and 321.	5	500 00	2,500 00	96½	2,412 50	6	150 00
Sept. 13.	City Hall Construction Bonds of the City and County of San Francisco—Numbered 247, 248, 249, 250, 251, 289, 290, 297, and 315.	9	500 00	4,500 00	98	4,410 00	6	270 00
March 8	City and County of San Francisco Bonds (so-called Slip Bonds)—Numbered 118, 119, 120, 121, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, and 898.	16	500 00	8,000 00	107½	8,600 00	7	560 00
June 7	Park Improvement Bond of the City and County of San Francisco—Number 124.	1	1,000 00	1,000 00	103	1,030 00	6	60
June 7	City and County of San Francisco—Funded Debt Bonds of 1858. Numbered 426 and 427.	2	500 00	1,000 00	103	1,030 00	6	60
	Numbered 822.	1	1,000 00	1,000 00	103	1,030 00	6	60
	Total investment to July 1st, 1877.	193		\$260,500 00		\$255,067 50		\$15,970 00

INVESTMENT OF SEMINARY LAND FUND IN BONDS.

Date of Purchase	Description of Bonds.	Number of Bonds	Denomination	Par Value	Rate of Purchase	Am't Paid.	Rate of Interest	Amount of Annual Interest
Jan. 31, 1877.	City and County of San Francisco, Funded Debt of 1858, Nos. 127, 303, 326, 327, 329, 349, 445, 471, 560, 605, 606, 610, 644, 645, 646, 647, 648, 657, and 766	19	\$1,000 00	\$19,000 00	102	\$19,380 00	6 pr. ct.	\$1,140 00

INVESTMENT OF SPECIAL INVESTMENT FUND IN BONDS.

Jan. 31, 1877.	City and County of San Francisco, Funded Debt of 1858, No. 973	1	\$1,000 00	\$1,000 00	100½	\$1,002 50	6 pr. ct.	\$60 00
Jan. 31, 1877.	City and County of San Francisco, Funded Debt of 1858, Nos. 597, 599, 600, 611, 613, 630, 631, 632, 633, 634, 635, and 636	12	1,000 00	12,000 00	102	12,240 00	6 pr. ct.	720 00
Jan. 31, 1877.	City and County of San Francisco, Funded Debt of 1858, Nos. 767, 768, 769, 770, 771, and 775	6	1,000 00	6,000 00	102	6,120 00	6 pr. ct.	360 00
Mar. 31, 1877.	City and County of San Francisco, Seven per cent. Bonds, due October 1st, 1883, Nos. 1044-1050 inclusive	7	1,000 00	7,000 00	107½	7,525 00	7 pr. ct.	840 00
	Nos. 108-117 inclusive	10	500 00	5,000 00	107½	5,375 00	7 pr. ct.	
	Total investment of bonds for account of Special Investment Fund	36		\$31,000 00		\$32,262 50		\$1,980 00

THE UNIVERSITY MEDAL FUND.

Dr. *Deposited with the Union Savings Bank, Oakland, Cal.* Cr.

1874.			1873.		
July 30---	To cash—Medal to F. Otis-----	\$125 00	March 13.	By deposit-----	\$2,383 68
Oct. 10---	To cash—Medal to J. M. Whitworth-----	125 00	June 30--	By deposit-----	56 05
Oct. 10---	To cash—Medal to F. H. Whitworth-----	125 00	Dec. 31--	By deposit-----	121 48
1875.			1874.		
July 26---	To cash—Medal to T. Barry-----	125 00	June 30--	By deposit-----	126 99
1876.			Dec. 31--	By deposit-----	115 79
Nov. 30---	To cash—Medal to D. B. Huntley-----	125 00	1875.		
Nov. 30---	To cash—Medal to F. L. Button-----	125 00	June 30--	By deposit-----	114 41
1877.			Dec. 31--	By deposit-----	114 86
June 30---	To balance-----	2,517 76	1876.		
		\$3,267 76	June 30--	By deposit-----	119 37
			1877.		
			Jan. 31--	By deposit-----	115 13
			1877.		
			June 30--	By balance-----	\$3,267 76
					\$3,267 76
					\$2,517 76

THE AGASSIZ PROFESSORSHIP FUND.

Dr. *Deposited with the Union Savings Bank, Oakland, Cal.* Cr.

1876.			1873.		
June 30---	To balance-----	\$485 56	March 13.	By cash from rent-----	\$100 00
			June 30--	By interest-----	2 35
			Dec. 31--	By interest-----	5 04
			1874.		
			June 30--	By interest-----	6 08
			Aug. 19--	By cash from rent-----	100 00
			Nov. 14--	By cash from rent-----	100 00
			Dec. 31--	By interest-----	9 27
			1875.		
			June 30--	By interest-----	15 22
			Dec. 11--	By cash from rent-----	125 00
			1876.		
			June 30--	By interest-----	22 60
		\$485 56			
					\$485 56
			1876.		
			June 30--	By balance-----	\$485 56
			Dec. 18--	By rent-----	125 00
			1877.		
			June 30--	By interest-----	39 50
					\$650 06
1877.			1877.		
June 30---	To balance-----	\$650 06	June 30--	By balance-----	\$650 06

REPORT OF THE LAND AGENT OF THE UNIVERSITY OF CALIFORNIA.

Total sales from April 19th, 1869, to January 30th, 1877, both inclusive.

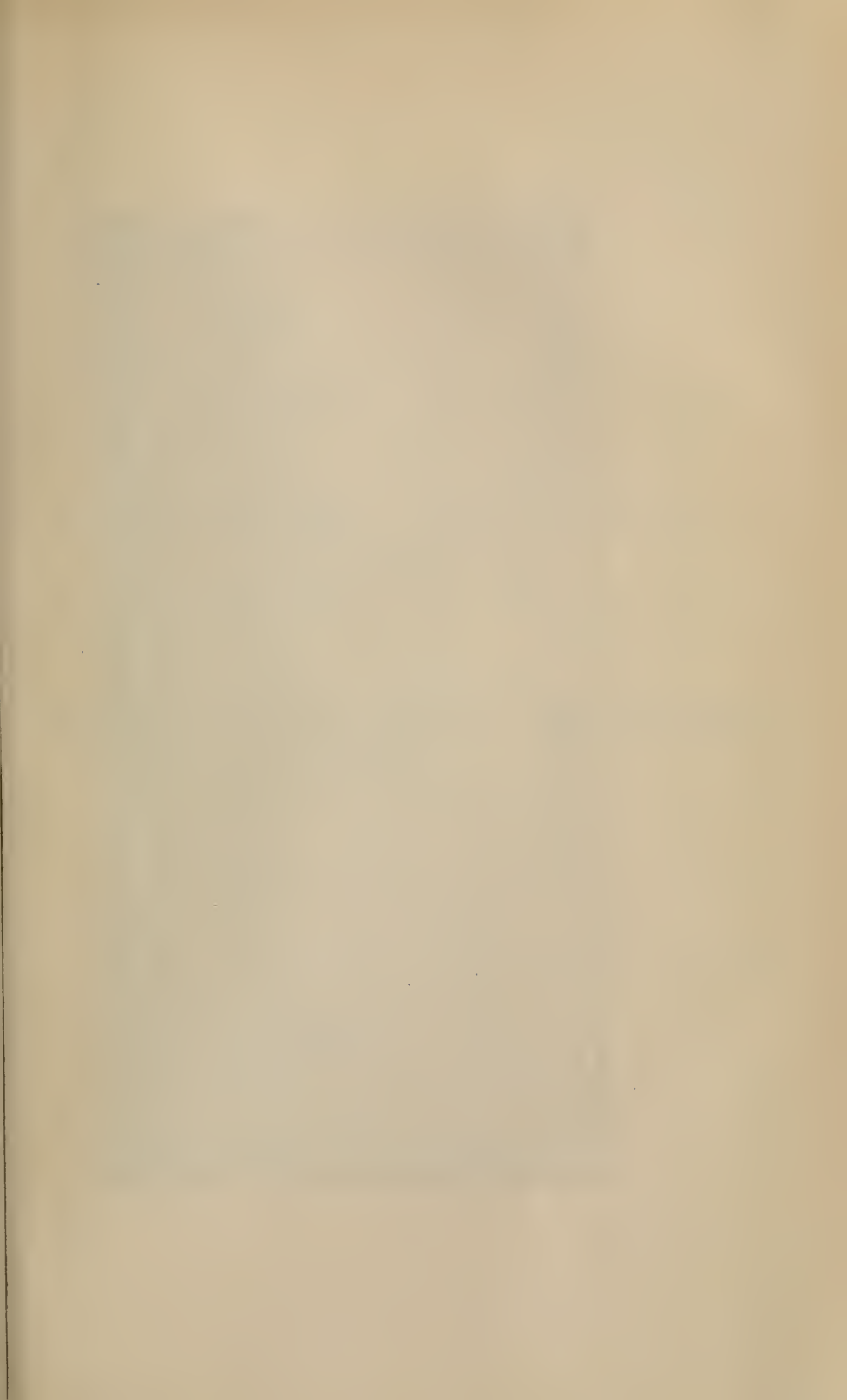
	Number of acres.	Amount paid.
Sales of land at \$5 00 per acre, payment in full-----	19,383.50	\$96,917 50
Sales of land at \$5 00 per acre, twenty per cent. of principal paid---	35,705.85	35,705 85
Sales of land at \$5 00 per acre, forty per cent. of principal paid----	2,680.00	5,360 00
Sales of land at \$5 00 per acre, sixty per cent. of principal paid-----	13,055.10	39,165 30
Sales of land at \$5 00 per acre, eighty per cent. of principal paid----	240.00	960 00
Sales of land at \$10 00 per acre, less \$1 25 per acre due United States, payment in full-----	160.00	1,400 00
Sales of land at \$6 25 per acre, less \$1 25 per acre due United States, payment in full-----	8,178.14	40,897 34
Sales of land at \$6 25 per acre, less \$1 25 per acre due United States, twenty per cent. of principal paid-----	46,816.71	46,816 71
Sales of land at \$6 25 per acre, less \$1 25 per acre due United States, forty per cent. of principal paid-----	40.00	80 00
Sales of land at \$6 25 per acre, less \$1 25 per acre due United States, sixty per cent. of principal paid-----	362.46	1,087 38
Sales of land at \$6 25 per acre, less \$1 25 per acre due United States, eighty per cent. of principal paid-----	480.00	1,920 00
Total amount sold-----	127,101.76	\$270,310 08
Add forfeiture of deposit on eighty acres-----		80 00
Total amount to credit of Land Fund-----		\$270,390 08

*Amount of unpaid balances of principal due in five years from date of approval on above sales,
bearing ten per cent. per annum.*

Balance due on lands sold at \$5 00 per acre-----	\$177,213 60
Balance due on lands sold at \$6 25 per acre-----	188,591 76
Total-----	\$365,805 36

J. HAM. HARRIS,
Land Agent.

Land Office of the University, California, June 30th, 1877.





Engraving by A. L. Barron & Co. 1856

University of Virginia

REPORT OF THE BOARD OF TRUSTEES

OF THE

Napa State Asylum for the Insane.

SEPTEMBER 1ST, 1877.

OFFICERS OF THE ASYLUM.

BOARD OF TRUSTEES:

F. E. JOHNSTON.....NAPA CITY.
A. G. BOGGS.....NAPA CITY.
GEORGE C. PERKINS.....SAN FRANCISCO.
JOHN BOGGS.....COLUSA.
P. VAN BEVER.....NAPA CITY.

SECRETARY AND TREASURER OF THE BOARD:

GEORGE W. GIFT.....NAPA CITY.

RESIDENT OFFICERS:

E. T. WILKINS, M. D.....RESIDENT PHYSICIAN.
L. F. DOZIER, M. D.....ASSISTANT PHYSICIAN.
J. B. STEVENS.....SECRETARY.
J. M. PALMER.....STEWARD.
F. E. GREY.....APOTHECARY.
J. T. JOHNSTON.....STEWARD'S CLERK.
MRS. MARY W. ROBINSON.....HOUSEKEEPER.

REPORT.

To His Excellency

WILLIAM IRWIN,

Governor of the State of California:

In compliance with the provisions of law, we present to you a statement of the expenditures, in detail, and transactions of the Board of Trustees of the Napa State Asylum for the Insane, from March fifteenth, eighteen hundred and seventy-six, to July first, eighteen hundred and seventy-seven, in the Medical Department, and from March fifteenth, eighteen hundred and seventy-six, to September first, eighteen hundred and seventy-seven, in the Construction Department.

The members of this Board met in the City of Napa on the sixteenth day of March, eighteen hundred and seventy-six, and after qualifying, by taking the usual oath of office, organized by electing Finis E. Johnston, President, and George W. Gift, Treasurer, and immediately entered upon the discharge of their duties by serving the written notice required by the second section of the "Act to provide for the future management of the Napa State Asylum for the Insane," approved March sixth, eighteen hundred and seventy-six. The Board of Directors thereupon delivered to us the possession of the building, and all books and papers pertaining thereto, and very kindly gave us all the information which they possessed in regard to the general condition and management of the same. We found a portion of the building already occupied by a Medical Department, under the supervision of Dr. Edwin Bentley, with a number of patients therein. No part of it was in a finished or complete state—masons, carpenters, plumbers, roofers, plasterers, etc., hurrying to and fro, busily and noisily engaged in performing their several contracts for its construction. It was scarcely protected from the inclemency of the weather, much less in a fit condition for occupancy. And notwithstanding these trying circumstances, we found that Dr. Bentley had disciplined and systematized his department very efficiently.

On an inspection of the books of the Board of Directors, we were unable to find anything showing either the state of the several contracts or the financial condition of the institution. We were informed that the treasury was exhausted of its funds, and large amounts were due to contractors. In order to ascertain the indebtedness of the institution, present and prospective, we called upon the Board of Directors to furnish us a statement thereof, which they promptly did in so far as they knew or could ascertain it.

We then proceeded to the election of a Resident Physician and an

Assistant Physician, as required by law. For the former office, we felt that we were but observing the wishes of the people of the State, as well as consulting the best interests of the institution, in selecting Dr. Edmund T. Wilkins, of Marysville, California, a regular graduate of the Memphis (Tennessee) Medical College, and a physician of great learning and reputation. Dr. Wilkins had for a number of years made the study of insanity and the treatment of the insane a specialty, having, by appointment of Governor Haight, visited all the principal Insane Asylums of the world, and collected a mass of statistics, gaining an experience and learning in the treatment and management of insane persons second to that of no other physician in the country. With his learning, he combined those rare qualities of temper, deportment, and executive abilities, that peculiarly fitted and qualified him for the tender and responsible position. In the person of Dr. Leonard F. Dozier, a regular graduate of the Savannah (Georgia) Medical College, we found an Assistant Physician who honors the station. Skilled and learned in his profession, with a clear head and a warm heart, he is ever ready to place on foot or second all measures calculated to advance the interests of the Institution or better the condition of his unfortunate patients. And we point with pride to the sanitary condition of the institution, and its efficient and economical management, as fully attesting the wisdom of our selections. Considering the embarrassments under which they have labored, and the obstacles which they have necessarily encountered, we believe no institution of similar character presents a fairer record.

At our request, Dr. Bentley furnished a statement showing the indebtedness of the Medical Department of the Asylum, contracted or incurred from the opening of the same for the reception of patients until the sixteenth day of March, eighteen hundred and seventy-six, to be a little over the sum of twenty-three thousand dollars. This statement was submitted by us to one of the committees of the last session of the Legislature, and we have been unable to find it since. Suffice it to say, however, that on that statement we asked, and the Legislature granted to us, an appropriation of forty-eight thousand dollars—twenty-four thousand dollars with which to pay that indebtedness, and twenty-four thousand dollars with which to pay the then estimated expenses of the Medical Department from March sixteenth, eighteen hundred and seventy-six, until the commencement of the fiscal year then next ensuing.

The Board of Directors submitted to us a statement in detail, showing the supposed amounts due the contractors of the Napa State Asylum for the Insane, and others, on the sixteenth day of March, eighteen hundred and seventy-six, and the amounts which would become due on the completion of the building; and also an estimate of the cost of certain supplementary work necessary to complete the entire building, etc., recommended by the architects and contemplated by the plans of the Asylum. This statement was substantially the same as that submitted by the Board of Directors to the Committees on Public Buildings and Grounds of the Senate and Assembly, and will be found on pages sixty-three and sixty-four of the joint report of those committees, volume five, Appendix to Journals of Senate and Assembly, twenty-first session. Armed with this statement, we asked, and the Legislature generously granted to us, an appropriation of four hundred and ninety-four thousand dol-

lars for the purpose of enabling us to pay the indebtedness then and to become due on account of the construction of the building and the doing of the supplementary work recommended, with this difference, that the Legislature struck out, in the estimate for the supplementary work, the item of twenty thousand dollars for principal entrance gate, lodge, and farm buildings, and the item of twenty-five thousand dollars for furniture; and reduced the estimate of fifteen thousand dollars for roads and grounds to ten thousand dollars, and the item of twenty thousand dollars for contingent expenses to ten thousand dollars.

From what data the Board of Directors obtained this statement we are unable to say, as after a very thorough and careful examination of the books and papers submitted to us by them, we were unable to find any record of any such indebtedness, or any indebtedness whatever. All that we could determine from them was that they had received a certain amount of money, and to whom, and partially for what it was paid.

The Act making the appropriation of four hundred and ninety-four thousand dollars (Statutes 1875-6, page 804,) made it our duty to pay all indebtedness against the State, on account of work done and materials furnished in the construction of the Napa State Asylum for the Insane, after a full and fair investigation as to its correctness. In order to ascertain to whom and for what the State was thus indebted, we caused an advertisement to be inserted in the principal newspapers of San Francisco and of Napa County, requesting all persons who had claims against the State, on account of the Asylum, to present the same itemized, and with the necessary vouchers, to the Secretary of this Board within a limited time. In response to that advertisement a great number of demands against the Medical Department, as well as against the Department of Construction, were presented. We proceeded to examine and audit those presented against the Medical Department, and found the number of demands, as well as the amounts, very largely in excess of what Dr. Bentley had reported to us, notwithstanding each bill presented against that department bore the signature of that gentleman as to its correctness, and also that of each member of the Committee on Finance of the Board of Directors. We are unable to account for this discrepancy between the statement of the indebtedness of this department as furnished by Dr. Bentley, and the certified unpaid demands presented, except upon the theory that he had only charged against that department those expenditures made in actually running it, and had not included many items of furniture and the like. For to do that gentleman, as well as his clerk, Mr. Miller, justice, it must be said that so far as their records pretended to go they were in excellent order.

Finding, from the number and amount of the claims made against this department, that there would be a deficiency—the forty-eight thousand dollars appropriated not being sufficient to pay this indebtedness and also the expenses of the institution until the commencement of the next fiscal year—we first paid the expenses of this department from March sixteenth, eighteen hundred and seventy-six, to July first, eighteen hundred and seventy-six, and applied the surplus to the payment of that indebtedness. Our expenditures, during the time last above named, amounted to the sum of twenty-four thousand six hundred and ninety-nine dollars and sixty-nine

cents, and the details of which will fully appear from the report of the Resident Physician, with this explanation: that bills amounting to ninety-eight dollars and twenty-four cents were audited and paid by this Board which were never presented to the Steward, and which, consequently, do not appear in his statement. We thus had left of the sum appropriated as aforesaid twenty-three thousand three hundred dollars and thirty-one cents, which we could apply to the payment of the indebtedness created and incurred by Dr. Bentley. After a careful and impartial investigation into the justice of the demands presented, and after giving the Medical Department the benefit of transferring all bills to the Construction Department that could be so transferred without doing violence to the law, we found these demands still largely in excess of the available funds for their payment. The following table will exhibit at a glance the names of the creditors, the amounts claimed, the amounts paid, and the amounts remaining due:

NAMES OF CREDITORS.	Amount Claimed.	Amount Paid.	Amount Due.
Haas Brothers.....	\$318 40	\$215 55	\$102 85
Hale & Co.....	444 65	301 00	143 65
Adams & Co.....	23 25	23 25	-----
E. N. Boynton.....	14 75	14 75	-----
H. M. Blumenthal.....	515 25	348 80	166 45
F. Borreo.....	235 74	159 60	76 14
Henry Bonnett.....	75	75	-----
F. Brughelli.....	116 80	79 00	37 80
A. L. Baneroft & Co.....	39 49	39 49	-----
A. G. Clark & Co.....	2 80	2 80	-----
M. B. Dolan.....	193 50	131 00	62 50
J. H. Howland.....	13 40	13 40	-----
G. F. Hartwell.....	130 92	88 60	42 32
Joseph Henry.....	1,304 91	883 40	421 51
Catherine Jacobson.....	4 00	4 00	-----
William Hunter.....	5 00	5 00	-----
Henry & Derby.....	9 10	9 10	-----
Daniel Kendig.....	8 00	8 00	-----
Kiefer & Smith.....	185 84	125 80	60 04
James Donnelly.....	30 98	30 98	-----
I. Gilchrist.....	4 20	4 20	-----
S. Lipman & Co.....	1,008 74	682 90	325 84
T. N. Martin.....	30 00	30 00	-----
F. Meyer.....	170 40	115 35	55 05
Thomas Meheren.....	7 25	7 25	-----
J. H. Mallett.....	35 20	35 20	-----
Mellor & Sylvester.....	760 05	514 55	245 50
D. N. & E. Walters.....	521 94	353 35	168 59
Western Union Telegraph Company.....	3 25	3 25	-----
West Coast Furniture Company.....	1,310 20	887 00	423 20
L. Miller.....	34 00	34 00	-----
D. B. Parks.....	45 50	45 50	-----
P. A. Owen.....	131 68	89 15	42 53
McBain & Co.....	23 30	23 30	-----
J. A. McClelland & Co.....	5 25	5 25	-----
Ira Marden.....	35 00	35 00	-----
O. Lawton & Co.....	629 75	426 35	203 40
H. P. Wakelee.....	1,325 75	897 50	428 25
California Pacific Railroad.....	16 05	16 05	-----
F. A. Seaman.....	60 50	50 05	10 45
Brittain, Holbrook & Co.....	2 00	2 00	-----
H. Mygatt.....	1 62	1 62	-----
Moody, Ullrich & Smith.....	7 50	7 50	-----
San Francisco Candle Company.....	42 00	42 00	-----
Amount carried forward.....	\$9,806 66	\$6,792 99	\$3,016 07

NAMES OF CREDITORS.	Amount Claimed.	Amount Paid.	Amount Due.
Amount brought forward	\$9,808 66	\$6,792 99	\$3,016 07
B. F. Sawyer	6 00	6 00	
Steamer Emma	31 25	31 25	
Record-Union	160 00	108 30	51 70
A. Sampson	24 00	24 00	
C. Reimers	6 30	6 30	
R. D. Watson	98 22	66 50	31 72
F. M. Truworthy	124 50	84 25	40 25
Simpson Thompson	118 63	80 30	38 33
Pioneer Drug Store	37 50	37 50	
M. W. Robinson	1 50	1 50	
Thompson & Beard	2,789 56	1,888 50	901 06
Allen & Parks	611 07	413 70	197 37
J. C. White	3,413 38	2,310 85	1,102 53
Dunham, Carrigan & Co.	672 94	455 60	217 34
Mission Woolen Mills	2,008 00	1,359 40	648 60
Scott & Hall	46 94	46 94	
Main & Winchester	94 00	63 65	30 35
Goodyear Rubber Company	106 50	72 10	34 40
J. C. White	1,266 77	857 60	409 17
Murphy, Grant & Co.	1,318 72	892 75	425 97
N. P. Cole	35 00	35 00	
John Clark	40 00	40 00	
Edward Bentley	3,460 50		3,460 50
J. C. White	20 00	20 00	
J. C. White	69 57	47 10	22 47
Pay-roll, October, 1875	687 15	687 15	
Pay-roll, November, 1875	1,127 49	1,127 49	
Pay-roll, December, 1875	1,488 33	1,488 33	
Pay-roll, January, 1876	1,574 33	1,574 33	
Pay-roll, February, 1876	1,763 00	1,763 00	
Pay-roll, to March 16th, 1876	884 82	884 82	
E. L. Mayberry	300 00		300 00
West Coast Furniture Company	35 00		35 00
Totals	\$34,229 63	\$23,266 80	\$10,962 83

After paying the several amounts shown above, there remained in our hands a small balance, which was transferred to the fund for the support of the asylum for the next fiscal year. In settling these demands we endeavored to pay all amounts under fifty dollars, and also all laborers in full, and then apportioned the remainder, the apportionment being about sixty-seven and one-half cents on the dollar. In the case of Dr. Bentley, the Board adopted the view that as he had failed to present a full statement of the indebtedness of his department, whereby we might apply for and obtain the necessary appropriation, he should be postponed to other creditors. While that view is an undoubtedly well supported equitable rule, yet, were the matter to be done over, we should probably act differently, because no one, and especially no one occupying an official position, should do any act which requires an explanation to show its correctness; and without this explanation our action in regard to the demand of Dr. Bentley might seem to have been prompted by spiteful or improper motives. The bill of E. L. Mayberry for three hundred dollars, and also that of the West Coast Furniture Company for thirty-five dollars, was not presented to us until after the Board had apportioned and paid the moneys applicable to such purposes. In these cases, as well as in all others where there is a balance due, we have issued to the claimants certificates, stating the amount, and

reciting the facts. We, therefore, ask your Excellency to recommend to the next Legislature the granting of an appropriation for the payment of this deficiency, and which is justly chargeable to the preceding administration. We also deem it but just that the parties should be paid interest on their respective demands, from, say March sixteenth, eighteen hundred and seventy-six.

We recapitulate our transactions with reference to the appropriation of forty-eight thousand dollars:

BOARD OF TRUSTEES.

Dr.

To appropriation.....	\$48,000 00
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Cr.

By amount paid support from March 16th to July 1st, 1876.....	\$24,699 69
By amount paid indebtedness under Dr. Bentley.....	23,266 80
By balance.....	33 51

Total.....	\$48,000 00
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In considering the claims presented for work done and materials furnished in the construction of the building, the Board found that a kind of knowledge was requisite which no one of its members possessed. It was not only necessary to determine what materials had been furnished, and what work had been done, but also necessary to determine whether or not such materials and labor were in accordance with contract and the plans, specifications, and detail drawings of the building. The Board, therefore, called to its assistance Mr. P. J. O'Connor, an architect of good reputation and skill, who was, to a great extent, familiar with the structure, he having served as Clerk to the Senate Committee on Public Buildings and Grounds of the Twenty-first Session, in its investigations into the affairs of the Asylum. In our investigations, we found that the statement which had been submitted to us by the Board of Directors, purporting to show the entire indebtedness for construction, was no nearer correct than was that submitted by Dr. Bentley as to the Medical Department. Numerous bills, not mentioned in their statement, were presented, notwithstanding each and every one of them was attested as genuine and correct by the signature of Messrs. Wright & Sanders, the architects of the building, and also that of the members of the Committee on Finance of the Board of Directors. After a long, tedious, and laborious investigation, Mr. O'Connor filed his report, which the Board subsequently passed upon and confirmed. Below we present a statement in detail, showing the names of creditors, the amounts claimed, and the amounts finally allowed and paid:

Names of Creditors.	Amount Claimed.	Amount Paid.
R. Bishop	\$5,536 50	\$5,536 50
George J. Mothersole	6,065 76	4,560 66
W. H. Holiday	360 00	360 00
Henry Colburn	129 25	129 25
George Hamlin	15 00	15 00
W. W. Fisher	332 00	332 00
L. Bruyere	343 50	343 50
Thomas Harvey	35 00	35 00
Richard Cuff	35 00	35 00
D. K. Darbyshire	201 45	201 45
G. M. Francis	83 00	83 00
F. W. Goddard	135 00	135 00
Matt. Gibson	333 50	333 50
E. R. Harriman	126 50	126 50
N. R. Tucker	1,168 00	1,168 00
F. A. Miller	382 50	382 50
K. Gudmundsen	256 25	256 25
J. H. Whalen	164 31	164 31
William Wolf	44 00	44 00
John Tierney	11 25	11 25
E. Lambert	35 00	35 00
John C. McMillan	30 00	30 00
A. C. Bradford	275 69	275 69
A. Coultis	171 00	171 00
Haas Bros.	13 25	13 25
Wells, Fargo & Co.	83 10	83 10
George Mothersole	55 50	55 50
C. A. Bramlett	193 00	193 00
John C. Molloy	273 00	273 00
John Eagan	35 00	35 00
M. McCune	35 00	35 00
Thomas Cuff	75 00	75 00
John Hadigan	15 00	15 00
Pat. Hogan	12 75	12 75
J. Mothersole	64 50	64 50
F. Manning	35 00	35 00
George Hart	334 00	334 00
Savage & Son	10 50	10 50
A. Sampson	6 50	6 50
Allen & Parks	112 33	112 33
W. C. Watson	250 00	250 00
A. Doble	342 00	342 00
J. H. Jewett	96 00	96 00
O. P. Ingraham	845 26	845 25
H. H. Knapp	13,644 51	13,644 51
F. A. Seaman	3,986 65	3,986 65
J. Batchelder	60 00	60 00
Nutting & Son	700 00	700 00
Baker, Smith & Co.	37,533 11	37,533 11
Cox & Colby	16,392 86	16,392 86
Eckfeldt & Co.	795 40	750 00
J. R. Sims	3,360 90	3,360 90
James Hunter & Co.	18,452 80	15,883 40
N. P. Perine	6,956 10	4,910 90
Cox & Warren	17,012 81	17,012 81
Noble & Gallagher	29,405 46	27,424 10
W. F. Wilson & Co.	18,740 28	18,200 28
Adams & Co.	5,961 73	5,961 73
Locke & Montague	7,163 44	7,163 44
E. L. Mayberry	88,329 84	82,296 57
R. Ewing	39,143 80	35,826 80
Steamer Express	271 25	271 25
George Howes & Co.	1,455 04	1,455 04
Batchelder Manufacturing Company	15 90	15 90
Dunham, Carrigan & Co.	282 16	282 16
James Edgington	10 00	10 00

Amount carried forward

\$327,830 18

\$310,793 45

NAMES OF CREDITORS.	Amount Claimed.	Amount Paid.
Amount brought forward	\$327,830 18	\$310,793 45
McBain & Co.	35 67	35 67
Leon R. Meyer & Co.	323 82	323 82
Peurhyn Slate Company	2,985 94	2,985 94
A. Doble	11 25	11 25
John Cochrane	10,141 00	10,141 00
Electrical Construction Company	10,650 00	6,750 00
Wright & Sanders	36,150 00	26,276 00
Freor Stone Company	17,296 96	12,104 96
Mrs. A. M. Slocumb	30 00	30 00
William Jones	5,152 98	2,476 35
Manhattan Marble Company	880 00	880 00
Totals	\$412,487 80	\$372,808 44

All of these demands were either for work done and materials furnished prior to our advent into office, or for work done and materials furnished thereafter under contracts made and entered into by the Board of Directors. Wherever we found a change could be made in any of those contracts that would lessen the cost and not destroy the utility, or seriously mar the proportions of the buildings, we effected it. We had frequent consultations with the architects as to the propriety and advisability of making changes and alterations in the designs for the structure, and were always, we believe, faithfully and economically advised by them.

The Electrical Construction Company had a contract for the sum of ten thousand six hundred and fifty dollars for putting electrical clocks and a system of telegraph wires and batteries into the building, as well as erecting a telegraph line from the Asylum to the City of Napa, and a great part of the materials were already in place in the structure at the time of our coming into office. Dr. Wilkins represented to us that the telegraphic system would be not only of no practical utility, but highly detrimental to an efficient administration of his department. We, therefore, notified that company that we would dispense with the telegraphic system, and immediately entered into negotiations for a settlement of their demand. We, finally, effected a compromise by paying six thousand seven hundred and fifty dollars—the deduction made being about the amount of the schedule rate for the part of the contract annulled.

William Jones represented that he had a contract for laying the floors of the towers and front entrances with tiling. We were unable to find any such contract, or any contract whatever with that gentleman. The estimated cost of this tiling work was about nine thousand dollars. On consultation, we concluded to lay these floors in cement, thereby saving about five thousand dollars. We did so; and, although the work was very poorly done, we believe it to be substantial, and will answer all practical purposes.

We caused the plans for the walls around the southern court-yards to be changed as to foundation, height, and thickness, thereby effecting a saving of several thousand dollars, without destroying or weakening the purposes for which they were intended.

We found on hand several thousand feet of costly maple flooring which had been furnished by Mr. Knapp under contract, and for which we had no use. In our settlement with that gentleman we

prevailed upon him to take back fourteen thousand feet at one hundred and thirty dollars per thousand, its cost price. We also found a great quantity of spruce flooring, and we have exchanged considerable of that for fencing and other lumber needed about the institution.

It will be observed that the claim for services made by the architects, Messrs. Wright & Sanders, has been reduced nearly ten thousand dollars. We have had a most unfortunate and annoying controversy with these gentlemen as to the merits of their demand. They claimed that the Board of Directors agreed, by an entry in their minutes, to pay them, for their services, five per cent. on the cost of the building. They also claimed that, by reason of changes and alterations made at the instance of that Board, they were compelled to draft entirely new plans, specifications, and detail drawings for the greater part of the structure. This Board found that the Board of Directors had made a contract with those gentlemen to pay them five per cent. on the contract price of the building. We found it impossible to agree with them as to what the percentage embraced—they insisting that it should be computed upon the entire cost of the structure, and we claiming that there were many large items upon which it should not be computed. We were equally unfortunate in our differences as to their claim for extra plans, etc. After giving them repeated hearings, and investigating the matter as thoroughly as we could, gaining all the light from every source possible, the Board finally allowed them the sum shown above, fully believing that was, and is, all to which they are fairly entitled.

We also fell into a very unpleasant controversy with Mr. O'Connor, our expert architect, in regard to the value of his services. Coming as highly recommended as he did, we did not deem it necessary to make an agreement with him as to the amount he should charge for his services. After he had completed his labors—being employed about two months—what was our astonishment when he presented us a bill of eight thousand dollars for services rendered! We had not then, nor have we now, one word to say against the manner in which he discharged his duties. We believe he acted fairly, honestly, and for the best interests of the State. But we thought then, and we think now, that his bill was out of all proportions to the amount and character of services rendered. Attempting to appreciate his abilities and faithfulness, we thought that two thousand five hundred dollars was a *liberal* compensation to him. But he did not so think; and has instituted a suit against this Board in the Twelfth District Court wherein he seeks to recover seven thousand five hundred dollars additional. We have joined issue with him, and propose to leave it to a jury to say what is the value of the services which he rendered. In our reflections on this subject we have been forcibly impressed that old Sam Weller intended architects instead of “vidders” in his celebrated injunction.

The written contracts of the several contractors stipulated that all payments for work done or material furnished should be made in United States gold coin, on the first day of each month in proportion as the work progressed, and all claims presented to us called for gold coin. We were unable to avail ourselves of the four hundred and ninety-four thousand dollar appropriation or any part thereof until after the first day of July, eighteen hundred and

seventy-six; and when we did obtain Controller's warrants drawn on account of that appropriation, we found there was no money in the State treasury with which to pay the same, and there would be none until about the first of February following. The several contractors being anxious to obtain their money, we endeavored to hypothecate these warrants, but could not do so short of leaving a margin of twenty cents on the dollar in the hands of the lender and paying a high rate of interest. To have done this would have so deranged our finances that we could not make certain needed improvements, without which the Medical Department would have been seriously embarrassed, if not wholly obstructed. We, therefore, paid all of the large claims with these warrants. These contractors now present to us bills for interest and damages on their several demands, as follows:

Noble & Gallagher.....	\$4,240 85
Wm. Jones.....	1,186 66
Baker, Smith & Co.....	7,725 47
Wright & Sanders.....	3,150 36
Robert Ewing.....	7,583 29
Wm. F. Wilson & Co.....	2,185 16
Freor Stone Company.....	1,313 65
H. H. Knapp.....	1,405 92
W. W. Montague.....	919 24
Cox & Warren.....	2,529 23
Cox & Colby.....	3,410 91
Jas. Hunter & Co.....	1,361 63
E. L. Mayberry.....	12,827 03
Total.....	\$49,839 40

We have not taken the trouble to examine into the details of these claims because, under our view of the law, we were not authorized to pay the same. Had the Legislature so intended, it would have so stated. It is true the law requires us to settle all *equitable* claims, yet not one item in the statement upon which the appropriation was based mentions such a thing as interest; besides, the State has, or ought to have, some equities, as well as contractors. And yet we believe these claims are entitled to some consideration. While it is true that many of their contracts were entered into in violation of law, it is equally true that the contractors were perfectly innocent, and in making their bids and entering into their contracts, did so in the full faith that they would be paid in gold coin, on the first of each month, in proportion as their work had progressed. The Legislature can investigate these demands, and do as justice requires.

Mr. Richard Dudding has also filed a claim against us for one hundred dollars, which we have declined to pay. It appears that under and by virtue of a resolution of the Assembly, twenty-first session, Mr. Dudding was employed by the Committee on Public Buildings and Grounds of that body to tabulate and classify the expenditures made by the Board of Directors, and make a report thereon. He performed the work satisfactorily, and the evidence of the amount of labor performed by him is found among the papers and documents in our possession. Mr. Cornwell, who was Chairman of that committee, has certified to the correctness of the bill, and we deem it but just that the Legislature should provide for its payment.

We have kept a separate account of all work done and materials furnished under our directions. The principal labor done has been

in filling and leveling grounds, increasing and preserving water supply, building walls around southern court-yards and erecting sheds therein, fitting up laundry and engine-room, laying railroad, draining yards by means of sewers and pipes, taking up and repairing steam-pipe in basement, and a general fitting up of the whole building. We have moved some of the cottages that were on the grounds to more eligible and convenient situations, and fitted the same for occupation by some of the principal employés of the Asylum. We have utilized the sewage for garden purposes, by conveying the same to a tract of land across the public road. In short, we have been compelled to expend thousands of dollars for purposes not mentioned in the statement upon which the appropriation was based. The details of these and other expenditures will be found in the following:

Grounds	\$8,857 86
Labor of masons	1,689 00
Watchmen	440 00
Advertising	191 50
Lime, cement, and sand	1,961 21
Teaming	286 85
Salary of Clerk and Superintendent of Construction	3,456 60
Freights	3,099 57
Water supply	5,635 86
Lumber	1,070 61
Carpenters	2,800 25
Salaries and mileage of Trustees	1,117 10
Office rent in Napa	310 00
Hardware	2,504 78
Blacksmith work	6,610 80
Labor of slaters, and slate	625 32
Office furniture	200 00
Engine, etc.	3,103 97
Repairs	529 15
Laundry	1,504 31
Carriage hire	42 50
Interest and discount	3,264 48
Railroad iron	1,251 95
Marble mantels and grates	2,784 00
Stationery	6 15
Walls around southern court-yards	4,091 70
Expert architect	2,500 00
Labor of tinsmith, and materials	233 69
Paints, and labor of painters	595 25
Elevators	5,375 00
Labor of plumber, and materials	261 99
Covering steam pipe	3,000 00
Surveyor's instruments	200 00
Cement floors in towers	1,314 00
Total	\$70,915 45

We have drawn of the four hundred and ninety-four thousand dollars appropriation the sum of four hundred and forty-four thousand dollars, up to the first day of September, eighteen hundred and seventy-seven, leaving a balance of fifty thousand dollars not yet drawn, and we recapitulate our transactions with reference to that fund:

BOARD OF TRUSTEES.

Dr.

To cash from State.....	\$444,000 00
To lumber returned H. H. Knapp as cash.....	1,820 00
Total.....	\$445,820 00

Cr.

By amount paid Construction Board of Directors.....	\$372,808 44
By amount paid Construction Board of Trustees.....	70,915 45
By cash on hand, September 1st, 1877.....	2,096 11
Total.....	\$445,820 00

Probably the most intricate and perplexing subject with which we have had to deal has been the water supply for the Asylum. The supply, as we found it, was barely sufficient, by the most prudent management, for ordinary hospital purposes. Shortly after our induction into office we addressed ourselves earnestly to the consideration of this subject. We employed Mr. H. Schussler, who is deservedly eminent in the profession of civil engineering, to investigate the various sources of water supply in the vicinity of the Asylum. After prospecting the country thoroughly, and causing accurate and careful surveys of proposed sites for dams to be made, he could find no place at which a reservoir could be located that could be constructed with the available funds for that purpose, or that had sufficient elevation to carry the water into the tanks in the towers. Under his instructions, the Attorney-General condemned, by an action instituted in the Seventh District Court for that purpose, certain lands, water rights, and rights of way on the stream which supplied the Asylum with water. We then laid pipe from the present reservoir to near the source of the springs which afford the present supply, thereby increasing the supply sufficiently for all hospital purposes, as well as obtaining purer and more wholesome water. But this does not afford any supply for steam, laundry, or irrigation purposes. Projects which we thought to be feasible, upon investigation have proved not to be so. At present we have in view a plan which we believe will solve the problem. We will expend what money we have, and if that is not sufficient, wait until the Legislature can grant us a further appropriation.

It will be necessary for the next Legislature to appropriate further amounts for the grading of the grounds. The institution is sadly in need of gas works. It is scarcely necessary to call your attention to the dangers incident to the use of lamps among the class of persons confined therein. It will soon become necessary to construct an elevator in the center building, in order that it may be used for the purposes for which it was designed. A barn and stable should also be erected as early as practicable. We are at present using a class of structure for this purpose that is very dangerous. There are a number of other improvements very much needed. We will obtain an estimate of what amount of funds will be required for these and other purposes, and submit the same to the Legislature at an early day, in all things being as economical as possible.

The transactions of the Medical Department for the fiscal year ending June thirtieth, eighteen hundred and seventy-seven, will be found in the report of Dr. Wilkins, herewith submitted. It is suffi-

cient to here give you a statement of the financial affairs thereof, which is as follows:

BOARD OF TRUSTEES.

Dr.

To cash—One-half of the appropriation	\$110,000 00
Balance \$48,000 appropriation	33 51
From pay patients, etc.	5,092 00
Total	\$115,125 51

Cr.

By amount paid for support	\$106,757 02
By cash on hand July 1st, 1877	8,368 49
Total	\$115,125 51

It will be observed that there is a discrepancy amounting to eighteen dollars and seventy-six cents between this account and the account of the Steward. This arises from the fact that the Board audited and paid bills to this amount which had not been presented to the latter, and which consequently do not appear on his books. It will also been seen that the Steward places some items under the head of construction. This arises from the great difficulty which we have had in determining whether a given piece of work properly belonged to the construction of the building or the Medical Department.

In conclusion, our task has been no easy one. An immense amount of labor has devolved upon us. We have tried to be economical in all things, and in all settlements just and fair. We have held nearly sixty separate meetings, devoting thereto as many separate days, besides twice as much time expended in looking after the general interests of the institution. We trust our labors have not been in vain.

Respectfully submitted,

FINIS E. JOHNSTON,
P. VAN BEVER,
A. G. BOGGS,
GEO. C. PERKINS,
JOHN BOGGS,

Trustees.

REPORT OF THE TREASURER

OF THE

NAPA STATE ASYLUM FOR THE INSANE,

For the Fiscal Years of 1875-6 and 1876-7.

		<i>Receipts.</i>	
1876.			
May 5	From the State, account of maintenance	\$11,000 00	\$48,000 00
May 9	From the State, account of maintenance	29,000 00	
June 10	From the State, account of maintenance	8,000 00	
July 6	From premium on gold, account of maintenance	46 23	
July 10	From the State, account of construction	167,001 17	
July 19	From the State, account of maintenance	7,291 66	
Aug. 8	From premium on gold, account of maintenance	125 00	
Aug. 10	From the State, account of maintenance	3,708 34	
Aug. 25	From the State, account of maintenance	11,000 00	
Aug. 25	From the State, account of construction	105,711 31	
Aug. 28	From premium on gold, account of maintenance	75 00	
Sept. 1	From premium on gold, account of maintenance	10 39	
Sept. 19	From premium on gold, account of maintenance	50 00	
Sept. 27	From the State, account of maintenance	11,000 00	
Oct. 6	From the State, account of construction	113,667 15	
Oct. 14	From premium on gold, account of maintenance	50 00	
Oct. 16	From premium on gold, account of maintenance	50 00	
Oct. 18	From premium on gold, account of maintenance	25 00	
Oct. 21	From the State, account of maintenance	8,333 00	
Nov. 8	From premium on gold, account of maintenance	10 00	
Nov. 9	From premium on gold, account of maintenance	50 00	
Nov. 24	From the State, account of construction	8,333 00	
Nov. 20	From premium on gold, account of maintenance	21,476 35	
Nov. 27	From premium on gold, account of maintenance	50 00	
Dec. 14	From premium on gold, account of maintenance	40 00	
1877.			
Jan. 4	From the State, account of maintenance	8,334 00	
Jan. 4	From the State, account of construction	16,638 75	
Jan. 10	From premium on gold, account of maintenance	40 00	
Jan. 16	From premium on gold, account of maintenance	30 00	
Jan. 29	From the State, account of maintenance	8,000 00	
March 7	From the State, account of construction	3,248 60	
March 8	From the State, account of maintenance	8,000 00	
April 11	From the State, account of maintenance	8,000 00	
Receipts carried forward		\$558,394 95	\$510,394 95

REPORT OF THE TREASURER—Continued.

	Receipts brought forward-----	\$558,394 95	\$558,394 95
April 16-----	From Dr. E. T. Wilkins, account of maintenance-----	3,505 48	
April 16-----	From the State, account of construction-----	5,000 00	
April 25-----	From the State, account of maintenance-----	9,333 00	
May 14-----	From Dr. E. T. Wilkins, account of maintenance-----	195 15	
June 9-----	From the State, account of maintenance-----	9,333 00	
June 9-----	From the State, account of construction-----	10,000 00	
June 18-----	From Dr. E. T. Wilkins, account of maintenance-----	403 20	
June 18-----	From the State, account of construction-----	4,505 27	
June 18-----	From the State, account of maintenance-----	9,334 00	
July 16-----	From Dr. E. T. Wilkins, account of maintenance-----	336 55	51,945 65
	<i>Recapitulation.</i>	\$610,340 60	\$610,340 60
	Receipts, fiscal year 1875-6-----	48,000 00	
	Receipts, fiscal year 1876-7-----	562,340 60	610,340 60
	<i>Expenditures.</i>		
	Paid out upon orders made by the Board of Trustees, and entered on their minutes-----	599,876 00	
	Balance, cash on hand-----	10,464 60	610,340 60

THE TREASURER

In account with Maintenance Fund for the Fiscal Year of 1875-6.

1876.	<i>Receipts.</i>		
May 5-----	From the State-----	\$11,000 00	
May 9-----	From the State-----	29,000 00	
June 10-----	From the State-----	8,000 60	\$48,000 00
	<i>Expenditures.</i>		
	Paid out upon orders made by the Board of Trustees, and entered on their minutes-----	47,966 49	
	Balance, cash in fund-----	33 51	48,000 00

THE TREASURER

In account with Maintenance Fund for the Fiscal Year 1876-7.

	<i>Receipts.</i>		
1876.	Balance from last year-----	\$33 51	
July 6-----	From premium on gold-----	46 23	
July 19-----	From the State-----	7,291 66	
Aug. 8-----	From premium on gold-----	125 00	
Aug. 10-----	From the State-----	3,708 34	
Aug. 25-----	From the State-----	11,000 00	
Aug. 28-----	From premium on gold-----	75 00	
Sept. 1-----	From premium on gold-----	10 39	
Sept. 19-----	From premium on gold-----	50 00	
Sept. 27-----	From the State-----	11,000 00	
Oct. 14-----	From premium on gold-----	50 00	
Oct. 16-----	From premium on gold-----	50 00	
Oct. 18-----	From premium on gold-----	25 00	
Oct. 21-----	From the State-----	8,333 00	
Nov. 8-----	From premium on gold-----	10 00	
Nov. 9-----	From premium on gold-----	50 00	
Nov. 24-----	From the State-----	8,333 00	
Nov. 27-----	From premium on gold-----	50 00	
Dec. 14-----	From premium on gold-----	40 00	
1877.			
Jan. 4-----	From the State-----	8,334 00	
Jan. 10-----	From premium on gold-----	40 00	
Jan. 16-----	From premium on gold-----	30 00	
Jan. 29-----	From the State-----	8,000 00	
March 8-----	From the State-----	8,000 00	
April 11-----	From the State-----	8,000 00	
April 16-----	From Dr. E. T. Wilkins-----	3,505 48	
April 25-----	From the State-----	9,333 00	
May 14-----	From Dr. E. T. Wilkins-----	195 15	
June 9-----	From the State-----	9,333 00	
June 18-----	From Dr. E. T. Wilkins-----	403 20	
June 18-----	From the State-----	9,334 00	
July 16-----	From Dr. E. T. Wilkins-----	336 55	\$115,125 51
	<i>Expenditures.</i>		
	Paid out upon orders of the Board of Trustees, regularly entered upon their minutes-----	106,757 02	
	Balance, cash in fund-----	8,368 49	115,125 51

THE TREASURER

In account with Construction Fund.

	<i>Receipts.</i>		
1876.			
July 10-----	From the State-----	\$167,001 17	
July 25-----	From the State-----	105,711 31	
Oct. 6-----	From the State-----	113,667 15	
Nov. 24-----	From the State-----	21,476 35	
1877.			
Jan. 4-----	From the State-----	16,638 75	
March 7-----	From the State-----	3,248 60	
April 16-----	From the State-----	5,000 00	
June 9-----	From the State-----	10,000 00	
June 18-----	From the State-----	4,505 27	\$447,248 60
	<i>Expenditures.</i>		
	Paid out upon orders of the Board, regularly entered on their minutes-----	445,152 49	
	Cash in fund-----	2,096 11	447,248 60

NAPA CITY, CAL., August 1st, 1877.

GEORGE W. GIFT,
Treasurer.

RESIDENT PHYSICIAN'S REPORT

To the Board of Trustees of the Napa State Asylum for the Insane.

GENTLEMEN: I hereby submit to you my Annual Report for the year ending with June thirtieth, eighteen hundred and seventy-seven.

You will find hereto annexed, for publication in your Biennial Report, my report from November fifteenth, eighteen hundred and seventy-five, to July first, eighteen hundred and seventy-six.

ANNUAL SUMMARY.

The following summary exhibits the number of patients in the Asylum July first, eighteen hundred and seventy-six, number admitted, number under care and treatment, number recovered and discharged, number discharged improved, number discharged unimproved, number discharged not insane, and the number of deaths and elopements, during the year ending with June thirtieth, eighteen hundred and seventy-seven, and the number remaining in the Asylum July first, eighteen hundred and seventy-seven:

From June 30th, 1876, to July 1st, 1877.	Males.	Females.	Totals.
Number of patients July 1st, 1876.....	134	74	208
Number admitted during the year ending June 30th, 1877.....	307	144	451
Number under care and treatment	441	218	659
Number discharged recovered.....	106	34	140
Number discharged improved.....	21	9	30
Number discharged unimproved.....	13	5	18
Number discharged not insane.....	16	7	23
Number died.....	34	15	49
Number eloped.....	4	-----	4
Discharged, died, and eloped.....	194	70	264
Number of patients remaining July 1st, 1877.....	247	148	395

The foregoing table shows that the year commenced with two hundred and eight patients; that four hundred and fifty-one were admitted; making the whole number of patients under care and treatment during the year, six hundred and fifty-nine. Of these, one hundred and forty have been discharged as recovered, thirty have been discharged as improved, eighteen unimproved, and twenty-three as not insane, while four have escaped, and forty-nine have died—leaving in the Asylum at the beginning of the present fiscal year, July first, eighteen hundred and seventy-seven, three hundred

and ninety-five patients, with ample accommodations for one hundred and forty-nine more.

Of those discharged as not insane, four, in my opinion, feigned insanity to escape the just penalty of crimes they had committed; four were cases of delirium from excessive alcoholic indulgence (acute alcoholism); four were old drunkards (chronic alcoholism), who, like the preceding four, showed no symptoms of insanity after they had been in the Asylum a few days, or a week at most. One was a case of delirium from injury to the head, recommended to be sent here as a precautionary measure; two were cases of secondary syphilis, who feigned insanity that they might be sent to the Asylum, with the view of being treated for physical disease; one was a first-class "tramp"—fat, lazy, and good for nothing—who delighted in being supported by the bounty of the State, and decidedly opposed to earning his bread by the sweat of his face. The other seven discharges represent six females, some of whom exhibited no signs of insanity while in the Asylum, while others were more or less irritable in temper or depressed in spirits, produced by ill-health, domestic broils, loss of sleep, anxiety for the sick, and death of husband or children. And, though all of these causes are factors of mental derangement, I did not think it had been produced in these cases, and therefore discharged them as not insane. Possibly in most institutions these cases would have been discharged as cured; and had it been done here the percentage of recoveries would have been increased to that extent, and we would have been credited therewith. But thinking it might be of some advantage to the patient for us to say, that while under our care he or she was not insane, and believing it to be our duty to record all cases in accordance with our convictions, they were discharged as not insane. I wish, however, to distinctly disavow any intention whatever of attributing the least blame to any of the Judges or physicians by whom these persons were committed to the Asylum. Cases are taken before them, often, with such an array of witnesses, swearing to insane acts and speeches on the part of the accused, the decision could not be otherwise. And, in several instances, I have been informed by the physician who signed the commitment, that the testimony was too strong to be ignored, though the person committed appeared to be sane.

When I was placed in charge of this Asylum, on the eighteenth day of March, eighteen hundred and seventy-six, I found that my predecessor, Dr. Edwin Bentley, had been laboring under great disadvantages and many difficulties in its organization. Some of these are incident to the opening and organization of every new Asylum, and were to be expected; but most of them arose from the unfinished condition of the building. No ward in the Asylum was completely furnished or finished until some time after my appointment, though five wards for males and one for females were occupied in the north wing, and two female wards in the south wing. Thus the patients were, from necessity, occupying the extreme ends of an immense building, while the center building and intervening wards were filled with scores of busy workmen.

It was rather surprising that even an approximate to discipline or order should be evolved out of such a condition of affairs; yet it is due to Dr. Bentley, and I say it with pleasure, that everything was moving on harmoniously and with as much system and order as could be expected under the circumstances.

The furniture and other property on hand at the time of my accession were receipted for at the time, and reported to the Board of Trustees. The articles consumed and furnished since will be found in the Steward's report, in the appendices of this report.

From these reports it will also be seen that the per capita expense of maintenance has gradually diminished from the opening of the Asylum till the present time.

During the first three months of the year eighteen hundred and seventy-six the average daily cost of maintenance was one dollar and eighty-one cents per capita. During the next three months, the last of the fiscal year, it was reduced to one dollar and eight cents; average for the six months being one dollar and thirty-one cents. And during the last fiscal year it was still further reduced to seventy-three cents per capita. And for the last quarter of the fiscal year ending June thirtieth, eighteen hundred and seventy-seven, the average daily cost per capita was sixty and three-fifth cents. This is in accordance with our expectations, and we may safely estimate a still further reduction as the numbers increase.

The Asylum was originally intended for the accommodation of five hundred patients; but the attic in the center building having been finished for a large dormitory, has increased its capacity to the extent of forty-four additional patients. But as it is in the fifth story, and in the executive building, it will be both very inconvenient and dangerous for the occupancy of patients until the passenger elevator shall have been constructed. Owing to the complete system of heating and ventilating the Asylum, however, with some pressure, the ultimate number might be extended to six hundred, beyond which it cannot be extended without detriment. This naturally leads to the consideration of the *future provision for the insane* in the State. The Asylum at Stockton is still terribly overcrowded, and this will probably be filled to its utmost capacity within the next two years, when the question will again have to be met, and provision made for this unfortunate class of our afflicted and suffering citizens, whose numbers will continue to increase in the ratio of about one to four hundred and fifty of the population. But, as we all know, *asylums are costly structures*. The cheapest cannot be constructed for less than one thousand dollars per capita for each patient to be accommodated, while more extravagant structures will cost from two to three thousand dollars per capita. I therefore suggest to your Honorable Board, and through you recommend to the Legislature, that provision be made for the construction of a "State Alms House," for the accommodation of such persons as are excluded by law from admission into the Asylums of this State, but who are nevertheless committed by the Judges, and received by the officers of the Asylums, for the reason that there is no other place to send them. The law of the land is violated or disregarded, at the earnest and irresistible demands of the law of humanity. An Alms House for six or eight hundred patients can be constructed in a plain, neat, and substantial manner, with large dormitories and day-rooms, after the fashion of the Pauper Lunatic Asylums of England and other foreign countries, at a cost of not exceeding six hundred dollars per capita. But, aside from the economical construction of such an institution, it could be maintained at much less expense than is possible in an Asylum for the Insane, "and would put an end, I should hope, to the constantly enumerating as our insane, a class of persons who are not, to such an

extent, so recorded in other parts of the world. A person, quiet and harmless, who is impaired nearly to helplessness, or carelessness, in body and mind, is not insane in the popular sense, nor a subject for a hospital for the insane in the custom of the best regulated public charities. The number of our insane is greatly magnified by the continual habit of keeping such cases in our Asylums, and our State is constantly presented in a false and unfavorable light thereby."

I know full well that the demands upon the public treasury are numerous, pressing, and heavy. I know that some of the old buildings at Stockton have long been a shame and a disgrace to that excellent Asylum, that they should be pulled down and destroyed, and more comfortable, comely, and healthy structures erected in their stead, in accordance with, what I am informed, Dr. Shurtleff will ask of the next Legislature. I am painfully aware that this splendid Asylum is constantly endangered by the use of kerosene lamps, necessarily used in every department, because we have not the means to erect gas works. I know too, that we have been compelled to pay one hundred dollars per month, during the dry season of last year, to prevent a neighbor from diverting our scanty supply of water to his own use, and that we can never successfully beautify and adorn our grounds with grass plots, shrubs, and flowers until a reservoir shall have been constructed. And with none of these objects do I desire to interfere, nor conflict, yet the time will soon come when other buildings must be erected, and every consideration of economy and propriety strongly points to the establishment of an Almshouse for the State. The Asylums at Stockton and Napa, thus relieved in reality, as they are now sought to be relieved by law, would afford accommodations for the insane proper for many years to come, and we would no longer hear Californians spoken of as the craziest people in the world.

MEDICAL TREATMENT AND MANAGEMENT OF PATIENTS, ETC.

Since the organization of the Association of Medical Superintendents of Insane Asylums, and particularly since the establishment of journals specially devoted to the subject of insanity, in all its bearings, the points indicated in the above heading are seldom touched upon in the reports of Superintendents, except in a very general and cursory manner, calculated to interest and enlighten the general reader. Indeed, in the more recent reports from the various Asylums throughout the country, with very few exceptions, we find the subject of treatment entirely omitted; and we are induced to give place to it at this time, chiefly for the reason that this being the first report issued from this institution, we feel it somewhat incumbent upon us to make some general statement of our mode of managing that most unfortunate class entrusted to our care and treatment. We have no specifics for the cure of any form of insanity, nor have we any hobby upon which we hope to ride into special notice and notoriety, but in prescribing for our patients we have endeavored to do so upon rational principles, interpreting the symptoms presented in each individual case as best we could, and directing our remedies in accordance with our judgment of the indications to be met, for restoring the physical system as near as possible to a healthy normal condition.

As a rule, we use but little medicine, our prescription book show-

ing not more than fifteen per cent. taking it daily; and of these, a large proportion are epileptics, who are kept more or less constantly on the remedies usually resorted to in the treatment of that disease.

We find no data in the published reports upon which to base a comparison with other Asylums, but from extended personal observation of the practice pursued in most of the American and many of the European Asylums, and inquiries made of the medical staffs in charge of these institutions, we think it probable that a smaller amount of drugs is consumed here than in any other institution of equal size in the United States, and perhaps Europe also. An additional reason for this conclusion is derived from the fact of our complete immunity and exemption from nearly all acute physical diseases, whether of an epidemic, or general and varied character, except such as existed in the persons of our patients at the time of their admission, and were the recognized cause of their mental derangement. And this, in turn, is accounted for by reason of our peculiar and great natural advantages, of location, climate, etc., which, together with a new building, combining all the improvements and requirements of the strictest and most enlightened laws of health, places us upon the most elevated plane, from a hygienic point of view.

But, as it might be thought by some that our ratio of mortality does not exactly comport with this high encomium upon our extraordinary advantages for the promotion and restoration of health, and our freedom from disease by virtue of these advantages, both natural and artificial, we beg to say that this apparent discrepancy is brought about by causes which require only to be mentioned to be fully understood and appreciated.

It has always been, and is still, the custom in California to commit a class of indigent sick to the Insane Asylums, covering every phase of mental unsoundness. A very large number of these cases are explicitly excluded by the laws of the State, and would not be admitted into the insane hospitals of any other State in the Union, certainly none east of the Rocky Mountains, nor, indeed, those of any community of well regulated charities. A large proportion of our dead are from those sent from the alms houses and county hospitals, whose physical systems are completely broken down and destroyed by the long continued action of chronic organic disease, and whose minds break down in the general destruction.

Quite a number of our dead, too, have been old men and women, cases of purely senile dementia, whose unnatural sons and daughters have grown weary of their charge and managed to have them committed to the Asylum for the Insane; or who, having neither relatives or friends to take charge of them, were sent to the Asylum because no other place has been provided for their reception.

They should not properly be numbered among the insane, and yet we are compelled to publish them to the world as such. They are absolutely beyond reach, and amenable to no treatment; they each add one to the number of insane, unjustly accredited to the State, and they serve to augment greatly the ratio of mortality in our asylums.

We consume very few drugs in the management of the cases above cited, for the reason that any systematic treatment is worse than useless, a waste of medicine without the chance of good results, and only adds to the discomfort and misery of the patient. There is another,

and quite a numerous class of patients to whom we administer but little medicine—those whose insanity is unquestionable and yet whose physical condition is so near an approach to good health that even the most practiced eye fails to locate and define the lesion which causes the mental disturbance.

It is like shooting in the dark to physic such cases, and therefore we trust to the reparative processes of nature, assisted by a well ordered and properly regulated life for their relief.

Though we have claimed a somewhat limited use of drugs, still our therapeutics has been considerably varied, but of course largely the majority of prescriptions made have been either tonic or stimulant, sedative, and cathartic or laxative in character—a feature no doubt common to all kindred institutions.

For the purpose of procuring for the patient rest and sleep at night, it is our practice to use a recipe combining the hydrate of chloral, bromide of potasium and tincture of hyosciamus. This tripple compound has appeared to us to have a better effect than either remedy taken alone, or either two combined. Those to whom it might be necessary to administer this medicine at night are excluded from the average given of the number under daily medical treatment. The average cost per day of drugs consumed in the institution is about one dollar and eighty-five cents. The gross expenditure in that line includes instruments and apparatus of various kinds. In connection with treatment, I would remark that we have, to a limited extent, used the “blue glass,” the virtues of which gained considerable notoriety at one time through the writings and experiments of General Pleasanton of Philadelphia, and during a portion of the past year was made the subject of much comment by the newspaper press.

A large number of our patients are very fond of reading newspapers, and some of them seeing the wonderfully marvelous results ascribed to the powers of this new agent, conceived the idea that they would be relieved by it. For this reason we procured the glass and had it arranged in certain windows convenient for use by such converts to the theory as desired to test it, and we have good reasons for believing that in several instances, and in the case of one enthusiast particularly, the effects have been most salutary. For ourselves, we are not prepared to ascribe these good results to any virtue in the blue rays, from the fact that we could appreciate no change in those cases subjected to its influence who had no faith in its efficacy, or who had no knowledge of the subject. The good results, therefore, were, in our judgment, due to the agency of another, and to our mind, better established principle—the influence of the mind over the body—and we think that those whose faith is sufficiently strong can be relieved of many ailments by using blue glass. But the difficulty with the application of this latter theory in the treatment of the insane is, that believers are few and converts hard to make; because the majority of such people, either think that there is nothing the matter with them, or that their malady is incurable by any or all means, or else are incapable of entertaining any very well defined ideas upon any subject.

In the moral or disciplinary treatment of our patients, we have endeavored to keep pace with the most reasonable, enlightened, and advanced views on the subject. We try to select our attendants from the best material at our command, and make it a special point to im-

press upon their minds the fact that they have to deal with persons bereft of reason, and therefore irresponsible.

We take the pains, by precept and example, to establish and build up a feeling of kindness and sympathy on the part of attendants towards those under their immediate supervision, and never fail to rebuke sharply any act of rudeness, or marked discourtesy, or even lack of proper respect and consideration for patients; while it is distinctly understood that no assault, except in self-defense, under extraordinary and plainly justifiable circumstances, and no vindictive treatment, under any circumstances, will be tolerated. That violations of these teachings and regulations do occur, without ever coming to our knowledge, we have no doubt; and that they will be repeated, in spite of the most rigid discipline and closest watchfulness, is equally certain. Dismissal can only follow detection.

In the selection of attendants we endeavor to keep constantly in view the mental, moral, and muscular qualities of the applicants that they may readily comprehend the manifold, delicate and responsible duties of the position; the moral courage to act justly and honorably to those placed under their care on all occasions, and under all circumstances, and the physical power to enforce obedience to all necessary rules and requirements, in a firm, quiet, and conciliatory manner. It is of the utmost importance that those in charge of the insane should be ever master of themselves, free from passion, kind, cool, and deliberate. Yet when a strong and violent patient has one or both hands firmly fastened into the hair or whiskers of an attendant endeavoring to drag him to the floor, or with diabolical teeth pressing harshly upon the flesh, it is not to be expected, nor always possible, to feel amiable, or say in gentle tender words: "That is wrong, you must not do so any more." For ourselves, we try to cultivate a personal acquaintance with every patient in the house, and seek to inspire each one with such regard and confidence that he or she may feel free, at any time, to make known promptly any wish or grievance, and we never deceive a patient, or make one a promise that we do not intend and expect fully to comply with.

On two of the eleven wards for male patients we have placed a man and his wife in charge of each as attendants, and have reason to be satisfied with the result thus far. The patients seem to be more orderly, quiet, and respectful, as well as more contented; but this arrangement is only practicable among quiet or convalescent patients.

We have not found it practicable to dispense with the use of mechanical restraint, but have endeavored to resort to its employment only in such instances as we felt it to be a necessity, and when no other course would, in our judgment, conserve the best interests of the patient so well.

Our restraining apparatus is all of the simplest kind, constructed almost exclusively of cloth, and of patterns such as are least calculated to inflict bodily pain from compression or abrasion. It is used by direction of the medical officers only, under a rule of the institution, and we use our best efforts to prevent any violation of this rule.

It is only in rare and exceptional instances that we resort to solitary confinement, even as a means of treatment; but on the contrary, keep our patients as much as possible in the open air, requiring all whose condition will permit of their leaving the wards to spend two

hours, morning and evening, in the large and well-arranged airing courts, or roaming among the adjacent hills and fields, in charge of an attendant. Our aim and desire is to relieve their minds as much as possible from any idea of restraint or imprisonment.

As a rule, we do not permit strangers to visit the wards and yards while the patients are in them, and have been led to the adoption of this course from a firm conviction that the opposite plan is not only distasteful and embarrassing to the patients, but seriously detrimental in its effects upon them.

The entire house is always open to inspection for a worthy and proper purpose, and certain portions of it to all comers, at stated hours. Those who have friends here are never denied a meeting, unless for some special reason, which is always explained; but to the ordinary sight-seer or curiosity-hunter we have no patients to exhibit.

The bodies of a considerable proportion of those who have died in the institution have been removed by friends or relatives immediately. *Post mortems* have not generally been performed, but, as a rule, only in cases of extraordinary interest, or to establish the immediate cause of death when doubtful. Nothing more can be done in this line, and absolutely nothing in the way of scientific research, under the present organization of the medical corps.

The time of two physicians is too constantly occupied in necessary attentions to the living to devote much of it to the dead; and, indeed, it will be absolutely necessary for the proper performance of the ordinary and imperative duties devolving upon the medical officers, to have a second assistant physician appointed by the time our number of patients reach five hundred.

I beg, therefore, to urgently recommend that if the present law for the management of this Asylum does not authorize the Board of Trustees to make such an appointment, you will endeavor to have it so amended by the next Legislature as to give you that power.

In addition to the daily visits to the wards, the Resident Physician, from the nature of his office as Superintendent of the Asylum, has many duties to perform, and many calls upon his time; and has to rely in this, as in all other similar institutions, upon the Assistant Physician for the most of the prescribing, and all of the details in the execution of the medical practice. Dr. Dozier, my assistant, in addition to his skill as a physician and surgeon, possesses rare qualities, both of head and heart, which peculiarly qualify him for the position he has so efficiently filled; or, indeed, any position to which he might be appointed. Attentive to all of his duties, prompt in their execution, and kind in disposition, he has responded willingly and cheerfully to every call that has been made upon him. But, being compelled to be at our posts every day in the week, and every week in the year, the system demands occasional rest and recreation, which can be indulged in when there is but one assistant only at the sacrifice of some interest of the institution committed to our care.

By reference to the table of nativity it will be observed that nearly two-thirds of our patients are of foreign birth, notwithstanding the population from which they are supplied constitutes but about one-third of the whole. Having discussed this peculiar feature of the insane population of our State on other occasions, it is deemed unimportant to do more than allude to the subject now. Many of these patients are citizens of foreign countries, and other States of the

Union; and some arrangement should be made whereby the expense of taking care of them could be collected from the governments to which they belong. The law now upon our statutes seems to be useless, because there is no power to enforce it; and we are compelled to expend thousands of dollars annually in taking care of these subjects of Great Britain, Germany, Mexico, and other countries.

OCCUPATION AND EMPLOYMENT.

One of the greatest difficulties we have had to contend with is that of finding occupation and employment for most of our patients, and furnishing amusements to divert and occupy the mind. Some progress has been made in this direction, however, and I hope it will continue more rapidly in the future. We have a splendid amusement hall, where the patients assemble once a week to participate in the dance; as often as we can procure ministers to hold service on the Sabbath, and for other purposes, as occasion presents.

One ward has been established on the male side for such patients as are willing to work upon the grounds, in the garden, at the stable, laundry, and dairy, and such other employments as seem to be suited to the mental and physical condition of the patient. A similar ward has been opened on the other side of the Asylum for such women as can be induced to work in the sewing-room and laundry. Much valuable work has been done by these patients, for which they deserve great credit, while many others assist in taking care of and keeping the wards in order.

OBLIGATIONS.

We gratefully acknowledge the receipt of a valuable collection of books and pictures from the Rev. John S. Pierson, of New York, whose liberal donations to the various asylums in this country justly entitle him to be recognized as the great benefactor and kind hearted friend of the insane throughout the length and breadth of the land. One hundred and fifty volumes of well selected books, and half as many pictures, have been placed to the credit of this generous and noble philanthropist.

Our thanks are also due, and hereby tendered, to Mr. Ewing, and Payot, Upham & Co., of San Francisco, and David L. Haas, of Napa City, for contributions to our library; to the "Sacramento Daily Bee," "Lake County Democrat," the "San Francisco Spirit of the Times," and the "The Elevator," of San Francisco, for copies of their valuable papers, and trust the generous and humane examples set by them will be followed by many other publishers of the State.

In addition to the contributions above enumerated, I have purchased, with the liberal approval of the Board of Trustees, eighty additional volumes for the library, caused one hundred pictures to be framed and hung up in the various wards of the Asylum, thereby relieving the monotony of the halls, and have caused a stage to be fitted up in the amusement hall, the curtains and drapery of which were painted by a patient, and where we have been favored with occasional dramatic entertainments by some of the officers and attendants, very much to the amusement and entertainment of the patients and others who witnessed them.

The McGebney Family, Tennessee Jubilee Singers, German Band,

Industrial School Band of San Francisco, and General Tom Thumb and troupe, have all paid us a visit, and placed us under obligations that we shall not soon forget.

The Reverends W. R. Gober, Richard Wylie, H. H. Rees, W. H. Moore, E. B. Hatch, and Professors Damon and Rogers of the Napa Collegiate Institute, have on various occasions kindly volunteered to hold divine service in our beautiful chapel, and contributed much to the entertainment and comfort of the patients and others who listened to their sermons; and while thankful to them for past favors, I hope that they and others will not weary of their good deeds, but come again.

Prominent among those connected with our specialty, who have honored us with a visit, were Doctors Gray, of Utica, New York, Shew, of Middletown, Connecticut, Shurtleff and Brown of Stockton, and Hayne and Bates of San Francisco, all of whom were most cordially welcomed, and who, I can only hope, were as well pleased with our Asylum as they seemed to be.

In conclusion, I beg leave to say that whatever of success has attended the operations of the Asylum since its management passed into my hands has been due to the cordial and efficient coöperation of the officers and employés who, almost without exception, seem to feel a personal interest in its success and reputation.

From you, gentlemen, I could ask nor desire any greater boon than the continuation of that confidence which you have hitherto bestowed upon me, and which has been evinced on all occasions by the most courteous treatment and unstinted support. Fully appreciating your kindness, and gratefully acknowledging the obligations under which you have placed me,

I am, very respectfully,

E. T. WILKINS,
Resident Physician.

APPENDIX A.

TABLE I.

Showing the counties from which four hundred and fifty-one patients were admitted, from July 1st, 1876, to July 1st, 1877.

COUNTIES.	Males	Females	Totals
Alameda	19	11	30
Colusa	10		10
Contra Costa	3	1	4
El Dorado	3		3
Humboldt	8	1	9
Lake	2		2
Los Angeles	12	2	14
Marin	2		2
Mendocino	5	1	6
Modoc	1		1
Napa	10	6	16
Nevada	12	5	17
Sacramento	3	5	8
San Diego	2		2
San Francisco	168	92	260
San Luis Obispo	3	2	5
San Mateo	7		7
Santa Barbara	3	2	5
Santa Clara		1	1
Santa Cruz	3		3
Siskiyou	2	1	3
Solano	8	4	12
Sonoma	11	8	19
Sutter	2	1	3
Tehama	2		2
Trinity	1		1
Ventura	1		1
Yolo	3	1	4
Yuba	1		1
Totals	307	144	451

TABLE II.

showing the nativity of four hundred and fifty-one patients, admitted from July 1st, 1876, to July 1st, 1877.

NATIVITY.	Males	Females	Totals
<i>United States.</i>			
California	10	3	13
Connecticut	3		3
Illinois	5	2	7
Indiana	1	2	3
Iowa	1		1
Kentucky	4	1	5
Louisiana	4	1	5
Maine	3	4	7
Maryland	1		1
Massachusetts	7	7	14
Michigan	1		1
Mississippi	1		1
Missouri	5	4	9
New Hampshire	3	1	4
New Jersey	1	2	3
New York	21	10	31
Ohio	7	4	11
Pennsylvania	3	4	7
Rhode Island	1		1
Vermont	3	2	5
Virginia	4		4
West Virginia	1		1
Wisconsin	1		1
United States	6		6
Totals	97	47	144
<i>Territories.</i>			
Arizona	1		1
Indian	1		1
Totals	2		2
<i>Foreign Countries.</i>			
Australia	2		2
Austria	1		1
Bohemia		1	1
British America		1	1
Canada	5	2	7
Chili	1	1	2
China	6	2	8
Calcutta	1		1
Denmark		1	1
England	17	8	25
France	11	3	14
Germany	39	17	56
Hanover	1	1	2
Ireland	70	48	118
Italy	5		5
Mexico	3	2	5
New Brunswick		1	1
New Zealand	1		1
Norway	3	1	4
Nova Scotia	1	1	2
Poland	2		2
Carried forward	169	90	259

TABLE II—Continued.

NATIVITY.	Males	Females	Totals
Brought forward.....	169	90	259
Portugal.....	1	—	1
Prussia.....	6	—	6
Russia.....	1	—	1
Scotland.....	10	2	12
Sonora.....	1	—	1
Sweden.....	5	—	5
Switzerland.....	2	1	3
Spain.....	1	—	1
Wales.....	2	—	2
West Indies.....	—	1	1
Western Islands.....	2	—	2
Unknown.....	8	3	11
Totals.....	208	97	305
RECAPITULATION.			
<i>Nativity.</i>			
United States.....	97	47	144
Foreign Countries.....	200	94	294
Territories.....	2	—	2
Unknown.....	8	3	11
Totals.....	307	144	451

TABLE III.

Showing the ages of four hundred and fifty-one patients at the time of their admission in the Asylum, from July 1st, 1876, to July 1st, 1877.

AGES.	Males	Females	Totals
Between 5 and 10 years.....	1	—	1
Between 10 and 15 years.....	1	—	1
Between 15 and 20 years.....	7	5	12
Between 20 and 25 years.....	28	13	41
Between 25 and 30 years.....	42	18	60
Between 30 and 35 years.....	65	30	95
Between 35 and 40 years.....	62	20	82
Between 40 and 45 years.....	40	20	60
Between 45 and 50 years.....	24	20	44
Between 50 and 55 years.....	12	11	23
Between 55 and 60 years.....	9	1	10
Between 60 and 65 years.....	6	1	7
Between 65 and 70 years.....	3	1	4
Between 70 and 80 years.....	3	2	5
Unknown.....	4	2	6
Totals.....	307	144	451

TABLE IV.

Showing the supposed cause of insanity in four hundred and fifty-one patients, as stated in commitments, from July 1st, 1876, to July 1st, 1877.

SUPPOSED CAUSES.	Males	Females	Totals
Intemperance	24	3	27
Masturbation	30	1	31
Epilepsy	21	5	26
Injury from fall	1		1
Over exertion		1	1
Business trouble	6	2	8
Hereditary	9	5	14
Disordered menstruation		4	4
Jealousy	1	2	3
Meningitis	1		1
Ill health	4	4	8
Evil suspicions	1		1
Sunstroke	1		1
Loss of property	3	2	5
Injury to head	3	1	4
Religion	4	5	9
Nymphomania		1	1
Domestic trouble	4	7	11
Change of life		9	9
Syphilis	4		4
Loss of memory	1		1
Fever	1		1
Grief		3	3
Puerperal fever		1	1
Nervous irritation	1		1
Death of father		1	1
Idiocy	1	1	2
Child-birth		3	3
Excessive study	3		3
Apoplexy	2		2
Use of absynth	1	1	2
Death of wife	2		2
Death of child		3	3
Sexual excitement		1	1
Disappointment in love	3		3
Spiritualism	1	1	2
Interference of mother		1	1
Paralysis		1	1
Convulsions	2		2
Uterine disease		1	1
Sickness in family		1	1
Injury to spine	1		1
Softening of brain	1		1
Overwork		1	1
Unknown	170	72	242
Totals	307	144	451

TABLE V.

Showing the class of insanity of four hundred and fifty-one patients at the time of admission, from July 1st, 1876, to July 1st, 1877.

CLASS.	Males	Females	Totals
Mania	156	85	241
Monomania	40	9	49
Acute mania	12	6	18
Sub-acute mania	2		2
Puerperal mania		3	3
Suicidal mania	2		2
Melancholia	20	14	34
Dementia	47	12	59
Imbecility	2	2	4
Dipsomania	1	1	2
Unknown	25	12	37
Totals	307	144	451

TABLE VI.

Showing the civil condition of four hundred and fifty-one patients, admitted from July 1st, 1876, to July 1st, 1877.

CIVIL CONDITION.	Males	Females	Totals
Married	79	92	171
Single	206	32	238
Widows		18	18
Widowers	10		10
Unknown	12	2	14
Totals	307	144	451

TABLE VII.

Occupation of four hundred and fifty-one patients, admitted from July 1st, 1876, to July 1st, 1877.

OCCUPATION.	Males	Females	Totals
Farmers	16		16
Miners	23		23
Laborers	73		73
Housewives		95	95
Carpenters	13		13
Brewers	2		2
Saloon keepers	6	1	7
Physician	1		1
Tailors	4		4
Tanners	2		2
Mining Secretary	1		1
Sailors	8		8
Soldiers	7		7
Servants	3	10	13
Merchants	6		6
Machinists	3		3
Shoemakers	9		9
Students	3	1	4
Harness makers	3		3
Coal-passer	1		1
Cooks	4		4
Sheep-herders	5		5
Barbers	2		2
Bakers	3		3
Speculators	2		2
Printers	2	2	4
Laundress		1	1
Laundryman	1		1
Midwife		1	1
Book-keepers	3		3
Fisherman	1		1
Wheelwright	1		1
Pursers	2		2
Saddler	1		1
Wood-turner	1		1
Dressmakers		4	4
Cigar makers	2		2
Salesman	1		1
Plasterers	2		2
Bricklayer	1		1
Hotel-keeper		1	1
Prostitute		1	1
Photographer		1	1
Flower vender		1	1
Teachers		3	3
Cattle drover	1		1
Marble polisher	1		1
Sashmaker	1		1
Cooper	1		1
Night watchman	1		1
Expressman	1		1
Gas-lighter	1		1
Plumber	1		1
Musician	1		1
Butchers	2		2
Moulder	1		1
Blacksmiths	11		11
Longshoreman	1		1
Varnisher	1		1
Mail-carrier	1		1
Carried forward	244	122	366

TABLE VII—Continued.

OCCUPATION.	Males	Females	Totals
Brought forward	244	122	366
Minister	1		1
Lawyers	4		4
Clerks	3		3
Insurance agent	1		1
Stationer	1		1
Hunter	1		1
Gambler	1		1
Ivory dealer	1		1
Dancing teacher	1		1
Teamsters	2		2
Gardener	1		1
Boiler maker	1		1
Porter	1		1
Ship caulker	1		1
Broom maker	1		1
Stair builder	1		1
Apothecary	1		1
Boatman	1		1
Fresco and scenic artist	1		1
Carriage painter	1		1
No occupation	37	22	59
Totals	307	144	451

TABLE VIII.

Showing the cause of death of forty-nine patients, from July 1st, 1876, to July 1st, 1877.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
July, 1876	Chronic disease of liver	New York	46		1
July, 1876	Consumption	Ireland	30		1
July, 1876	Paralysis	New York	39	1	
July, 1876	Consumption	Ireland	45		1
August, 1876	Maniacal exhaustion	Germany	48	1	
September, 1876	Consumption	Ireland	25		1
September, 1876	Exhaustion	Ireland	34	1	
September, 1876	Exhaustion	Indiana	38		1
September, 1876	Conjestion of lungs	China	57	1	
September, 1876	Exhaustion	New York	71	1	
September, 1876	General paralysis	Germany	46	1	
October, 1876	Typhoid fever	Ireland	37		1
October, 1876	Organic disease of brain	Rhode Island	47	1	
October, 1876	Paralysis	Ireland	43		1
October, 1876	Exhaustion	Germany	27		1
November, 1876	Maniacal exhaustion	Ohio	32	1	
November, 1876	Exhaustion	France	70	1	
November, 1876	Exhaustion	New Jersey	56	1	
December, 1876	Softening of the brain	Ireland	31		1
December, 1876	Maniacal exhaustion	Maine	49	1	
December, 1876	Pleuritis	Germany	50	1	
December, 1876	Erysipelas	Germany	74	1	
December, 1876	Marasmus	Germany	32	1	
January, 1877	Cerebral congestion	New York	50		1
January, 1877	Maniacal exhaustion	New Hampshire	40	1	
January, 1877	Congestion of the brain	Ireland	46		1

TABLE VIII.—Continued.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
January, 1877	Congestion of the brain	Ireland	25	1	---
February, 1877	General congestion	Germany	32	1	---
February, 1877	Phlegmonous erysipelas	Canada	52	1	---
February, 1877	Consumption	Ireland	35	1	---
February, 1877	Chorea	Spain	48	1	---
March, 1877	Exhaustion	Ohio	59	1	---
March, 1877	Consumption	Germany	30	1	---
March, 1877	Maniacal exhaustion	Germany	55	1	---
April, 1877	Chronic pulmonitis	Germany	36	1	---
April, 1877	General dropsy	Pennsylvania	40	---	1
April, 1877	Cerebral congestion	Prussia	58	1	---
April, 1877	Piemia	California	21	1	---
May, 1877	Scrofula	California	19	---	1
May, 1877	Paralysis	Ireland	30	---	1
June, 1877	Paralysis	Germany	43	1	---
June, 1877	Cerebral congestion	Massachusetts	43	---	1
June, 1877	Paralysis	Ireland	55	1	---
June, 1877	General paralysis	Germany	35	1	---
June, 1877	Exhaustion	New Brunswick	73	---	1
June, 1877	Typhoid pneumonia	New York	60	1	---
June, 1877	Exhaustion	Germany	60	1	---
June, 1877	Organic disease of brain	Germany	45	1	---
June, 1877	Softening of brain	Ireland	45	1	---

TABLE IX.

Recapitulation of the cause of death of forty-nine patients, from July 1st, 1876, to July 1st, 1877.

CAUSE OF DEATH.	Males	Females	Totals
Consumption	2	3	5
Maniacal exhaustion	5	---	5
Exhaustion	7	3	10
Organic disease of brain	5	4	9
Paralysis	4	1	5
All other causes	11	4	15
Totals	34	15	49

TABLE X.

Showing the number of articles made in the sewing-room, from July 1st, 1876, to July 1st, 1877.

ARTICLES.	Number.
Tapestry carpets	2
Two and three-ply carpets	55
Carpet mats	219
Bed ticks	143
Pillow ticks	161
White sheets	361
Brown sheets	793
Pillow slips—white	683
Pillow slips—check	226

TABLE X—Continued.

ARTICLES.	Number.
Pillow slips—brown.....	14
Bolster slips.....	18
Linen table cloths.....	78
Damask table cloths.....	6
Bath towels.....	148
Roller towels.....	88
Dresses.....	74
Skirts.....	26
Aprons.....	145
Collars.....	16
Sacks.....	6
Shirts.....	12
Waists.....	16
Night-gowns.....	151
Chemise.....	105
Drawers.....	113
Flannel skirts.....	149
Flannel shirts.....	8
Check jackets.....	27
Duck jackets.....	20
Duck sheets.....	2
Duck pants, pair.....	1
Suspenders.....	43
Boys' jackets.....	4
Boys' pants.....	4

TABLE FIRST.

Steward's account of articles consumed and purchased, and other expenses, for the fiscal year ending June 30th, 1877.

ARTICLES.	Value.
Flour.....	\$3,212 64
Meat.....	7,032 77
Sugar.....	1,279 46
Tea.....	265 28
Syrup.....	575 90
Potatoes.....	1,063 89
Butter.....	2,832 48
Coffee.....	648 14
Lard.....	86 40
Fish.....	80 87
Poultry and eggs.....	532 32
Beans and peas.....	342 46
Rice and cracked wheat.....	262 61
Cornmeal and oatmeal.....	204 08
Fruit.....	254 28
Vegetables.....	157 83
Salt.....	34 70
Vinegar.....	47 76
Small groceries.....	476 12
Soap.....	459 51
Drugs.....	709 07
Liquor and ale.....	450 48
Tobacco.....	347 79
Dry goods.....	2,936 44
Clothing and hats.....	1,383 86
Shoes and leather.....	528 27
Blankets.....	2,491 35
Carried forward.....	\$28,596 76

TABLE FIRST—Continued.

ARTICLES.	Value.
Brought forward	\$28,596 76
Furniture and crockery	8,067 34
Hardware and tinware	1,915 79
Hay	455 15
Grain and feed	317 27
Garden tools and seed	60 76
Lumber	700 72
Brooms and brushes	366 75
Books and stationery	476 97
Oil and glass	868 96
Fuel	11,958 96
Bedding	2,856 20
Castings, pipe, and iron	53 27
Miscellaneous	1,308 79
Milk	871 65
Carpeting	3,505 77
Repairs	72 70
Cows and horses	863 00
Wagons and harness	377 00
Spoons and cutlery	305 43
Feathers and hair	294 75
Discharged patients	574 50
Returned escapes	377 90
Returned to pay patients	144 60
Pay-roll and wages	38,013 82
Hogs	161 10
Printing and advertising	501 00
Interest and exchange	1,935 35
Construction	636 00
Total	\$106,738 26

TABLE SECOND.

Showing the cost of the different departments for the fiscal year ending June 30th, 1877.

DEPARTMENTS.	Cost.
Kitchen and dining-rooms	\$15,139 54
Wards	7,439 10
Bakery	3,729 03
Laundry	599 36
Engineer's department	11,146 66
Farm, garden, dairy, and stable	2,308 32
Repairs	734 13
Drug store	845 79
Center building	420 25
Office	781 90
Miscellaneous	1,904 48
Furnishing	20,603 53
Construction	636 00
Pay-roll and wages	38,013 82
Printing and advertising	501 00
Interest and exchange	1,935 35
Total	\$106,738 26

TABLE THIRD.

RECAPITULATION.

Maintenance	\$82,017 68
Cows and horses	863 00
Wagons and harness	377 00
Returned to pay patients	144 60
Hogs	161 10
Interest and exchange	1,933 35
Construction	636 00
Furnishing	20,603 53
Total	\$106,738 26

TABLE FOURTH.

Averages.

MONTHS.	Average num- ber of patients on hand daily.	Average daily expenses.	Average cost, per capita per day.	Average cost per capita per month.
July, 1876	217	\$184 65	85	\$26 35
August, 1876	245	224 88	92	28 52
September, 1876	256	225 25	88	25 40
October, 1876	266	205 62	77	23 87
November, 1876	274	218 51	80	24 00
December, 1876	293	230 09	79	24 49
January, 1877	321	239 55	75	23 25
February, 1877	329	247 84	75	21 00
March, 1877	344	228 20	66	20 46
April, 1877	358	230 80	64	19 20
May, 1877	378	228 73	61	18 91
June, 1877	388	234 91	60	18 00
Yearly average	306	\$224 71	73	\$21 90

TABLE FIFTH.

Products of the Farm, Garden, and Dairy for the fiscal year ending June 30th, 1877.

ARTICLES.	Amount.
Beets, pounds	2,147
Carrots, pounds	1,528
Cabbage, pounds	2,796
Green corn, dozen	314
Tomatoes, pounds	3,741
Radishes, pounds	290
Lettuce, pounds	595
Turnips, pounds	2,287
Spinach, pounds	55
Cauliflower, pounds	12
Green peas, pounds	234
Onions, pounds	69
String beans, pounds	187
Eggs, dozen	367½
Corn, pounds	4,200
Chickens, dozen	6
Hay, tons	60
Milk, gallons	4,132
Pork, pounds	10,021
Veal, pounds	120

APPENDIX B.

The following summary exhibits the number of patients admitted; number recovered and discharged; number discharged, improved; number discharged, unimproved; number discharged, not insane, and the number of deaths and elopements, from November 15th, 1875 (the date of opening the Asylum), to July 1st, 1876.

	Males	Females	Totals
Number of patients admitted from November 15th, 1875, to July 1st, 1876	219	102	321
Number under care and treatment	219	102	321
Number discharged, recovered	55	14	69
Number discharged, improved	6	5	11
Number discharged, unimproved	3	2	5
Number discharged, not insane	2	2	4
Number died	15	5	20
*Number eloped	4		4
Discharged, died, and eloped	85	28	113
Number remaining July 1st, 1876	134	74	208

*The dead body of one of these was found hanging to the limb of a tree about one mile east of the Asylum, in a dense thicket of brushwood, some six weeks after making his escape. An inquest was held by the Coroner, and the remains taken in charge by friends of deceased.

TABLE I.

Showing the counties from which three hundred and twenty-one patients were admitted from November 15th, 1875, to July 1st, 1876.

COUNTIES.	Males	Females	Totals
Alameda	2	5	7
Amador	1		1
Butte		1	1
Colusa	3		3
Contra Costa	5		5
Del Norte	1		1
El Dorado		1	1
Lake		1	1
Los Angeles	7	3	10
Marin	4		4
Mendocino	3	2	5
Napa	6	3	9
Placer	1		1
Sacramento	10	6	16
San Diego	3		3
San Francisco	139	71	210
San Joaquin	1		1
San Mateo	3		3
Santa Barbara	1		1
Santa Clara	2	2	4
Santa Cruz	2		2
Shasta		1	1
Siskiyou	1		1
Solano	7	3	10
Sonoma	10	1	11
Sutter	1		1
Tulare		1	1
Yolo	4		4
Yuba	2	1	3
Totals	219	102	321

TABLE II.

Showing the nativity of three hundred and twenty-one patients, admitted from November 15th, 1875, to July 1st, 1876.

NATIVITY.	Males	Females	Totals
<i>United States.</i>			
Alabama	2		2
California	12	3	15
Connecticut	1		1
Indiana	1		1
Illinois	1	2	3
Kentucky	2	1	3
Louisiana	1	1	2
Maine	2		2
Massachusetts	5	3	8
Maryland	3		3
Missouri	3	3	6
New Jersey	4	1	5
Carried forward	37	14	51

TABLE II—Continued.

NATIVITY.	Males	Females	Totals
Brought forward	37	14	51
New Hampshire	2	—	2
New York	13	8	21
North Carolina	1	1	2
Ohio	5	1	6
Oregon	1	—	1
Pennsylvania	4	3	7
Rhode Island	1	—	1
Texas	1	—	1
Tennessee	—	1	1
Virginia	5	—	5
Wisconsin	—	3	3
United States	4	1	5
Totals	74	32	106
<i>Foreign Countries.</i>			
Austria	1	—	1
Alsace	1	—	1
Australia	—	1	1
At Sea	1	—	1
Bavaria	1	—	1
Belgium	2	—	2
Bohemia	1	—	1
Canada	4	—	4
China	6	1	7
Cuba	1	—	1
Denmark	1	1	2
East Indies	1	—	1
England	6	4	10
France	5	3	8
Germany	30	10	40
Guatemala	1	—	1
Hamburg	1	—	1
Hanover	1	—	1
Ireland	47	45	92
Italy	2	—	2
Jamaica	1	—	1
Mexico	4	1	5
New Brunswick	—	2	2
Norway	5	—	5
Portugal	1	—	1
Poland	1	—	1
Prussia	2	—	2
Scotland	5	—	5
Society Islands	1	—	1
Sweden	5	1	6
Switzerland	1	1	2
Unknown	5	—	5
Wales	1	—	1
Totals	145	70	215
<i>Recapitulation.</i>			
United States	74	32	106
Foreign countries	140	70	210
Unknown	5	—	5
Totals	219	102	321

TABLE III.

Showing the ages of three hundred and twenty-one patients at the time of their admission in the Asylum, from November 15th, 1875, to July 1st, 1876.

AGES.	Males	Females	Totals
Between 5 and 10 years	2	1	3
Between 10 and 15 years	3		3
Between 15 and 20 years	5	4	9
Between 20 and 25 years	20	10	30
Between 25 and 30 years	20	15	35
Between 30 and 35 years	44	15	59
Between 35 and 40 years	27	20	47
Between 40 and 45 years	27	7	34
Between 45 and 50 years	26	13	39
Between 50 and 55 years	15	8	23
Between 55 and 60 years	13	4	17
Between 60 and 65 years	4	2	6
Between 65 and 70 years	4	1	5
Between 70 and 80 years	3	1	4
Unknown	6	1	7
Totals	219	102	321

TABLE IV.

Showing the supposed cause of insanity in three hundred and twenty-one patients, as stated in commitments, from November 15th, 1875, to July 1st, 1876.

SUPPOSED CAUSES.	Males	Females	Totals
Intemperance	16	2	18
Masturbation	14	1	15
Hereditary	5	5	10
Domestic troubles	3	8	11
Ill health	3	2	5
Homesickness		2	2
Grief		2	2
Political troubles in Guatemala	1		1
Epilepsy	9	1	10
Sunstroke	4		4
Disappointment in love	1	2	3
Apoplexy	2		2
Business troubles	7	1	8
Death of mother		1	1
Change of life		3	3
Death of child		3	3
Death of father	1		1
Puerperal state		5	5
Disordered menstruation		5	5
Uterine congestion		1	1
Paralysis	3		3
Organic disease of brain	3		3
Old age	1	1	2
Injury to head	2	2	4
Losses in mining stocks	2		2
Brain fever	1		1
Fall from building	1		1
Arrested development	1		1
Carried forward	80	47	127

TABLE IV—Continued.

SUPPOSE CAUSES.	Males	Females	Totals
Brought forward	80	47	127
Anxiety to make money	1	—	1
Jealousy	1	—	1
Spiritualism	2	—	2
Excessive heat	1	—	1
Death of friend	1	—	1
Unknown	133	55	188
Totals	219	102	321

TABLE V.

Showing the class of insanity of three hundred and twenty-one patients, at the time of admission, from November 15th, 1875, to July 1st, 1876.

FORM OF DISEASE.	Males	Females	Totals
Mania	125	61	186
Monomania	21	7	28
Melancholia	9	7	16
Dementia	30	9	39
Acute mania	4	3	7
Unknown	30	15	45
Totals	219	102	321

TABLE VI.

Showing the civil condition of three hundred and twenty-one patients, at the time of their admission, from November 15th, 1875, to July 1st, 1876.

CIVIL CONDITION.	Males	Females	Totals
Married	60	55	115
Single	132	26	158
Widows	—	18	18
Widowers	9	—	9
Unknown	18	3	21
Totals	219	102	321

TABLE VII.

Occupation of three hundred and twenty-one patients, admitted from November 15th, 1875, to July 1st, 1876

OCCUPATION.	Males	Females	Totals
Miners	9		9
Farmers	19		19
Laborers	33		33
Housewives		61	61
Servants		9	9
Sailors	11		11
Soldiers	2		2
Cooks	4	2	6
Clerks	4		4
Carpenters	8		8
Tailors	2		2
Butchers	5		5
Merchants	4		4
Machinists	2		2
Blacksmiths	6		6
Baker	1		1
Saloon keepers	4		4
Printers	1	1	2
Seamstresses		2	2
Gardeners	2		2
Teachers		2	2
Peddlers	2		2
Cabinet makers	3		3
Mechanics	2		2
Engineers	5		5
Lawyer	1		1
Sheep-herders	3		3
Musician	1		1
Salt manufacturer	1		1
Wheelwright	1		1
Iron moulders	2		2
Expressmen	2		2
Coachmen	2		2
Stevedore	1		1
Painters	3		3
Shoe-maker	1		1
Salesman	1		1
Dentist	1		1
Brokers	3		3
Sashmaker	1		1
Stable keeper	1		1
Hotel keeper	1		1
Waiters	2		2
Newsboy	1		1
Harness maker	1		1
Brewer	1		1
Bootblack	1		1
Student	1		1
No occupation	41	19	60
Unknown	16	6	22
Totals	219	102	321

TABLE VIII.

Showing the cause of death of twenty patients, from November 15th, 1875, to July 1st, 1876.

Months.	CAUSE OF DEATH.	Nativity.	Age.	Males	Females
December, 1875	Consumption	California	22	1	
January, 1876	Maniacal exhaustion	Pennsylvania	31		1
February, 1876	Epilepsy	Ireland	35	1	
February, 1876	Inanition	Mexico	26	1	
February, 1876	Softening of brain	East Indies	43	1	
March, 1876	Softening of brain	Germany	26		1
March, 1876	Cerebral apoplexy	Rhode Island	50	1	
March, 1876	Acute bronchitis	China	55	1	
March, 1876	Exhaustion	Maine	45	1	
April, 1876	Inanition	Ireland	50		1
May, 1876	Maniacal exhaustion	United States	40	1	
May, 1876	General paralysis	France	46	1	
May, 1876	Softening of brain	Ireland	34	1	
May, 1876	Dropsy	Scotland	57	1	
June, 1876	Paralysis	Massachusetts	52	1	
June, 1876	Paralysis	Ireland	55	1	
June, 1876	Maniacal exhaustion	North Carolina	23		1
June, 1876	Cerebral paralysis	Sweden	61	1	
June, 1876	Paralysis	United States	54	1	
June, 1876	Consumption	Ireland	30		1

TABLE IX.

Recapitulation of the cause of death of twenty patients, from November 15th, 1875, to July 1st, 1876

CAUSE OF DEATH.	Males	Females	Totals
Consumption	1	1	2
Maniacal exhaustion	1	2	3
Epilepsy	1		1
Inanition	1	1	2
Disease of brain	4	1	5
Acute bronchitis	1		1
Exhaustion	1		1
General paralysis	1		1
Dropsy	1		1
Paralysis	3		3
Totals	15	5	20

TABLE X.

Showing the articles made in the sewing-room from November 15th, 1875, to July 1st, 1876.

ARTICLES.	Number.
Three-ply carpets	3
Two-ply carpets	12
Carpet mats	19
Bed ticks	18
Pillow ticks	92
White sheets	51
Brown sheets	348
Pillow slips	183
Table cloths	25
Towels	332
Dresses	22
Aprons	15
Sacks	6
Shirts	6
Waists	2
Night-gowns	13
Chemise	19
Drawers	20
Skirts	16
Jackets	28

TABLE FIRST.

Steward's account of articles consumed and purchased, and other expenses, from March 20th, 1876, to July 1st, 1876.

ARTICLES.	Value.
Flour	\$494 89
Meat	1,334 55
Sugar	310 11
Tea	55 23
Syrup	81 06
Potatoes	215 87
Butter	519 10
Coffee	163 60
Lard	46 32
Fish	58 90
Poultry and eggs	37 37
Beans and peas	42 43
Rice and cracked wheat	65 67
Cornmeal and oatmeal	58 07
Fruit	80 98
Vegetables	56 17
Salt	8 58
Vinegar	6 59
Small groceries	298 17
Soap	82 73
Drugs	438 61
Liquor and ale	71 54
Tobacco	64 42
Dry goods	555 93
Clothing and hats	255 30
Shoes and leather	121 28
Blankets	483 10
Furniture and crockery	1,287 99
Hardware and tinware	362 68
Hay	163 00
Grain and feed	50 25
Amount carried forward	\$7,970 49

TABLE FIRST—Continued.

ARTICLES.	Value.
Amount brought forward	\$7,970 49
Garden tools and seed	19 13
Lumber	242 76
Brooms and brushes	84 13
Books and stationery	117 78
Oil and glass	83 64
Fuel	2,807 03
Bedding	1,282 40
Castings, pipe, and iron	24 72
Miscellaneous	520 59
Milk	192 77
Carpeting	441 93
Repairs	62 66
Cows and horses	300 00
Wagons, harness, etc	209 75
Spoons and cutlery	37 63
Discharged patients	174 50
Returned escapes	26 00
Returned to pay patients	15 00
Pay-roll and wages	8,582 16
Printing and advertising	604 25
Interest and exchange	376 38
Construction	525 75
Total	\$24,601 45

TABLE SECOND.

Showing the cost of the different departments from March 20th to July 1st, 1876.

DEPARTMENTS.	Cost.
Kitchen and dining-rooms	\$3,270 37
Wards	1,650 51
Bakery	807 97
Laundry	156 79
Engineer's department	2,281 78
Farm, garden, dairy, and stable	804 23
Repairs	202 92
Drug store	475 81
Office	77 92
Miscellaneous	748 27
Furnishing	3,989 40
Construction	572 69
Pay-roll and wages	8,582 16
Printing and advertising	604 25
Interest and exchange	376 38
Total	\$24,601 45

TABLE THIRD.

Recapitulation.

Maintenance	\$19,185 17
Cows and horses	300 00
Wagons and harness	209 75
Returned to pay patients	15 00
Interest and exchange	376 38
Construction	525 75
Furnishing	3,989 40
Total	\$24,601 45

TABLE FOURTH.

Averages.

MONTHS.	Average number of patients on hand daily	Average daily expenses.	Average cost per capita per day	Average cost per capita per month
January, 1876	71	\$167 38	\$2 36	\$73 16
February, 1876	105	180 56	1 72	49 88
March, 1876	137	186 07	1 35	41 85
April, 1876	152	180 78	1 19	35 70
May, 1876	172	185 72	1 08	33 58
June, 1876	192	187 03	97	29 10
Averages	138	\$180 14	\$1 31	\$39 30

NOTE.—The estimates in the above table, for the months of January, February, and the first half of the month of March, are made from the expenses of the Asylum, as taken from the books of my predecessor.

NUMBER OF OFFICERS AND EMPLOYÉS

In the Asylum on the 30th day of June, 1877, and the salary paid each.

One Resident Physician	\$250 00
One Assistant Physician	166 66
One Secretary	100 00
One steward	150 00
One engineer	90 00
One carpenter	90 00
One steward's clerk	75 00
One apothecary	60 00
One housekeeper	50 00
One seamstress	40 00
Nineteen attendants	45 00
Eighteen assistant attendants	35 00
One night-watch (male department).	45 00
One night-watch (female department)	45 00
One messenger	40 00
One cook	75 00
One assistant cook	50 00
One assistant cook	40 00
One baker	60 00
One laundryman	60 00
Two assistants in laundry	20 00
One fireman and pipe-fitter	50 00
One fireman	40 00
One farm laborer	30 00
One farm laborer	25 00
One outside watchman	40 00
Two waiters	30 00
One hostler	30 00
One gardener	40 00
One porter	30 00

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D.







